Mother Board

V880DAS/ V880DA

User's Manual

AMD Socket 462 Processor Motherboard

VIA KT880 + VIA 8237

Revision 2.0

P / N: G03 –V880DAS

Table of Content

Safety Instructions

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please place the equipment on a reliable flat surface before installation.
4. Make sure the voltage of the power source when you try to connect the equipment to the power outlet.
5. All cautions and warnings on the equipment should be noted.
6. Disconnect this equipment from connecter before inserting add-on interfaces or modules.
7. Never pour any liquid into the opening, this could cause fire or electrical shock.
8. Explosion may occur if the battery is replaced incorrectly. Replace only with the type recommended by the manufacturer.
9. If one of the following situations arises, get the equipment checked by a service personnel:
   a. Liquid has penetrated into the equipment.
   b. The equipment has been exposed to moisture.
   c. The equipment has not work well or you can not get it work according to user's manual.
   d. The equipment has dropped and damaged.
   e. If the equipment has obvious sign of breakage.
10. Do not leave the equipment in an humidity or unconditional environment, storage temperature above 60°C(140°C), it may damage the equipment.

Precaution: It may void the warranty if any label on the equipment been removed.

Packing Item Checklist

- ☑ V880DAS / V880DA Motherboard
- ☑ Cable for IDE/Floppy
- ☑ Cable for Serial ATA IDE Port
- ☑ Cable for Parallel Port
- ☑ CD for motherboard utilities
- ☐ Cable for USB Port 3/4 (Option)
- ☑ V880DAS / V880DA User's Manual

AMD Socket A Processor Thermal Solutions

As processor technology pushes to faster speeds and higher performance with increasing operation clock, thermal management becomes increasingly crucial while building computer systems. Maintaining the proper computing environment without thermal increasing is the key to reliable, stable, and 24 hours system operation. The overall goal is keeping the processor below its specified maximum case temperature. Heatsinks induce improved processor heat dissipation through increasing surface area and concentrated airflow from attached active cooling fans. In addition, interface materials allow effective transfers of heat from the processor to the heatsink. For optimum heat transfer, AMD recommends the use of thermal grease and mounting clips to attach the heatsink to the processor.

Please refer to the website below for collection of heatsinks evaluated and recommended for Socket-A processors by AMD. In addition, this collection is not intended to be a comprehensive listing of all heatsinks that support Socket-A processors.

For vendor list of heatsinks and Active cooling fans, please visit：

http://www1.amd.com/products/duron/thermals

http://www1.amd.com/products/athlon/thermals

Chapter 1

Introduction of V880DAS / V880DA Motherboard

Thank you for purchasing the V880 series which provide extremely performance and meet future specification demand.

V880 series motherboards are adopted with advanced technologies to deliver the extremely performance for socket A processors. V880 series motherboards also feature AGP 8X, Serial ATA RAID0, 1, USB 2.0 as well as 6-channel audio which are based on the advanced VIA KT880 chipset with FSB 400MHz and Dual channel DDR 400 MHz support. Now we could know more details by reading the features of motherboards below.

1-1 Feature of motherboard

V880 series motherboards are designed for AMD Socket-A 200MHz/266MHz/333MHz/400MHz (Double Data Rate) Front Side Bus Frequency CPUs and the memory size expandable to 3.0GB.

By using VIA KT880 chipset which provides 400/333/266MHz (Double Data Rate) Front Side Bus frequency and Dual channel DDR266/333/400 SDRAM support as a obvious further step to the next generation of 200/266/333/400MHz processors.   V880 series motherboards also offer ULTRA ATA **133** and **Serial ATA RAID0, 1** functions to provide speedier HDD throughout that boosts overall system performance.

Integrated AC'97 CODEC audio on system supports 6 channel speaker for 3D Surround Effect which is fully compatible with Sound Blaster Pro® that gives you the best sound quality and compatibility.   AGP 8X slot enables more complex models and detailed textures with AGP 8X graphic accelerators which creates richer and more lifelike virtual environments. VIA VT6103 LAN PHY supports 10/100Mbps data transfer rate full duplex, half duplex operation. USB control as well as capability of expanding to 8 USB function ports support USB2.0/1.1 Devices.

Built-in hardware monitor function will monitor and protect your computer which is the special design in hardware for protecting Athlon XP CPU from burned, and will shutdown power supply automatically when CPU is overheated or the CPU cooling fan is not working.

Magic Duct Thermal Solution support, for decrease the temperature, and increasing the component lifetime to gain the reliability of Motherboard.

Minor adjustable CPU Vcore Voltage and DDR memory 2.5V Voltage, AGP 1.5V Voltage, and other *s*pecial functions allows user to increase CPU Host clock step by step by setting up BIOS to approach over clocking and increasing stability of the system.

1-2 Specification

Spec	Description
Design	∗ ATX form factor 4 layers PCB size: 30.5x22.0cm
Chipset	∗ VIA KT880 North Bridge Chipset ∗ VIA VT8237 South Bridge
CPU Socket	∗ Support AMD Athlon XP1500+~XP3200+ processor ∗ Support 200MHz/266MHz/333MHz/400MHz (Double Data Rate) Front Side Bus frequency processors ∗ Reserves support for future AMD Athlon XP /Duron/Sempron processors
Memory Socket	∗ 184-pin DDR module socket x3 ∗ Support **Dual channel** DDR266/DDR333/DDR400 DDR SDRAM Expandable to 3.0GB
Expansion Slot & Headers	∗ AGP slot x1 support AGP 3.0 & 8X mode ∗ 32-bit PCI slot x5
Integrate IDE and Serial ATA RAID	∗ Two PCI IDE controllers support PCI Bus Mastering, ATA PIO/DMA and the ULTRA DMA 33/66/100/133 functions that deliver the data transfer rate up to 133 MB/s; Two Serial ATA ports provide 150 MB/sec data transfer rate for two Serial ATA Devices and offer RAID0, 1 functions
On board LAN (for V880DAS)	∗ VIA VT6103 LAN PHY support 10/100Mbps full duplex, half duplex operation ∗ Support Boot On LAN function
Audio	∗ AC'97 Digital Audio controller integrated ∗ AC'97 Audio CODEC on board ∗ Audio driver and utility included ∗ Support 6 channel Speaker for 3D surround effect
Magic Duct	∗ Enhanced thermal solution to protect MOSFET from burnt out
BIOS	∗ Award 2MBit Flash ROM
Multi I/O	∗ PS/2 keyboard and PS/2 mouse connectors ∗ Floppy disk drive connector x1 ∗ Parallel port x1 ∗ Serial port x1 ∗ USB2.0 connector x4 ∗ USB2.0 headers x4 (connecting cable option) ∗ Audio connector (Line-in, Line-out, MIC & Game Port)

1-3 Performance List

The following performance data list is the testing result of some popular benchmark testing programs. These data are just referred by users, and there is no responsibility for different testing data values gotten by users (the different Hardware & Software configuration will result in different benchmark testing results.)

Performance Test Report

CPU: Athlon XP 3200+ (FSB 400MHz)

DRAM: 512MB DDR400 X2 (TwinMOS HY5DU56822C1) Total 1Gbyte Memory

VGA Expansion Card: ATi RADEON 9800 PRO (1024x768x32BIT Color)

Hard Disk Driver: IBM IC35L040AVVN07-0 (ATA-100 7200RPM)

BIOS: Award Optimal default

OS: Windows XP Professional

		200/200 Dual channel	200 / 200
3D Mark 2001SE		15896	16011
3D Mark 2003		5528	5526
AQUAMRK3		39372	39145
PCMark2004			
System / CPU / Memory		3837 / 3699 / 2494	3829 / 3682 / 2456
Graph / HDD		4271 / 3368	4277 / 3348
Content Creation Winstone 2004		25.6	25.8
Business Winstone 2004		23	23.4
Winbench 99 V1.2 :			
Business/Hi-end Disk Winmark99		9370 / 32800	10100 / 32100
Business/Hi-end Graphic Winmark		935 / 1700	917 / 1690
SISMark 2004: SISMark Rating(Internet Content Creation / Office Productivity)			
SISMark 2004		138 (153 / 125)	137 (153 / 123)
3D Creation / 2D Creation		164 /159	164 / 159
/ Web publication		138	138
Communication / Document Creation		129 / 144	122 / 146
/ Data Analysis		104	104
SISOFT Sandra 2004 : 1.CPU Arithmetic Benchmark 2.Memory bandwidth Benchmark 3.CPU Multi-Media Benchmark			
1.Dhrystone ALU	MIPS	8380	8380
Whetstone FPU iSSE2	FLOPS	3457	3457
2.Int/Float Buffered iSSE2	MB/S	2878 / 2689	2844 / 2645
3.Integer/Floating-Point SSE2	IT/S	20060 / 20619	20099 / 20660
UT2003 Benchmark			
Flyby / Botmatch	FPS	203.95 / 68.16	203.95 / 68.47
Quake3			
DEMO1 / DEMO2	FPS	247.5 / 245.3	247.5 / 240.8
Return to Castle Wolfenstein	FPS	131.9	131.1
Super Pi (1M)	Second	50s	50s
CPUZ System / CPU Clock		200 / 2199.7	200 / 2199.7
UT2004 (Resolution : 1024X768, High Quality option, D3D renderer)			
Botmatch / Flyby-Bridge of fate FPS		67.02 / 251.69	67.41 / 252.76
UT2004 (Resolution : 1024X768, High Quality option, OpenGL renderer)			
Botmatch / Flyby-Bridge of fate FPS		42.57 / 161.38	42.70 / 162.30
UT2004 (Resolution : 1024X768, High Quality option, Software (CPU Bench) renderer)			
Botmatch / Flyby-Bridge of fate FPS		16.84 / 30.01	16.74 / 29.59

1-4 Layout Diagram & Jumper Setting

PS/2 Mouse

LAN

MIC

LINE-IN

LINE-OUT

Magic Duct

PS/2 Keyboard   COM1   USB1   USB

CPU FAN

K/B Power ON Jumper **(JP1)**

SFAN2

CPU Socket

Magic Duct

PS2 KB/Mouse Port

DDR DIMM X3

COM1 Connector

USB Power On Jumper **(JP2)**

USB Port

ATX Power Connector

VIA KT880 Chip

USB Port/**LAN Connector**

CPU F.S.B. Frequency Selector **(JP3, JP4)**

ATA 133 IDE Connector **(IDE1)**

Audio Connector

SFAN1

VT6103L LAN Chip

AGP 4X/8X Slot

AC97' Audio Code

ATA 133 IDE Connector **(IDE2)**

PCI Slot

VIA VT8237 Chip

Serial-ATA Connector **(SATA1, 2)**

Winbond 83687THF Chip

4MBit Flash ROM BIOS

Wake On LAN

Floppy Connector

Clear CMOS **(JBAT)**

Speak/Power LED Connector

Front Panel Audio

Front Panel Connector

CD Audio

USB Power On Jumper **(JP6)**

SPDIF Connector

USB Port **(USB2, USB3)**

Parallel Port Connector

Jumpers

Jumper	Name	Description	Page
JP3, JP4	CPU Front Side Bus Frequency	2x2-pin Block	P.6
JBAT	CMOS RAM Clear	3-pin Block	P.7
JP1	Keyboard Power On Enable/Disabled	3-pin Block	P.7
JP2, JP6	Keyboard Power On Enable/Disabled	3-pin Block	P.7

Connectors

Connector	Name	Description	Page
ATXPOW	ATX Power Connector	20-pin Block	P.13
J1	PS/2 Mouse & PS/2 Keyboard Connector	6-pin Female	P.13
USB1/UL1	USB Port Connector	4-pin Connector	P.13
LAN (for V880DAS)	**LAN Port Connector**	**RJ45 Connector**	**P.13**
CN1	Audio Connector	3 phone jack Connector	P.13
COM1	Serial Port COM1 Connector	9-pin Connector	P.13
FDD	Floppy Driver Connector	34-pin Block	P.14
IDE1/IDE2	Primary/Secondary IDE Connector	40-pin Block	P.14
SATA1/SATA2	Serial ATA 1/2 Connector	7-pin Connector	P.15

Headers

Header	Name	Description	Page
AUDIO	Line Out/MIC header	9-pin Block	P.15
USB2/USB3	USB Port Headers	9-pin Block	P.16
PARALLEL	Parallel Port Headers	25-pin Block	P.16
HD LED	IDE activity LED	2-pin Block	P.16
RESET	Reset switch lead	2-pin Block	P.16
SPEAKER	Speaker connector	4-pin Block	P.16
PWR LED	Power LED	2-pin Block	P.17
PW BN	Power switch	2-pin Block	P.17
WOL	Wake On-LAN Headers	3-pin Block	P.17
SFAN1,SFAN2,CPUFAN	FAN Headers	3-pin Block	P.17
CDIN	CD Audio-In Headers	4-pin Block	P.18
SPDIF	SPDIF IN/OUT Port Header	9-pin Block	P.18

Expansion Sockets

Socket/Slot	Name	Description	Page
ZIF Socket 462	CPU Socket	462-pin PPGA CPU Socket	P.9
DIMM1, DIMM2, DIMM3	DDR SDRAM Module Socket	184-pin DDR SDRAM Module Expansion Socket	P.10
PCI1, PCI2, PCI3, PCI4, PCI5	PCI Slot	32-bit PCI Local Bus Expansion slots	P.11
AGP	AGP 8X Mode Slot	AGP Expansion Slot	P.12

Chapter 2

Hardware installation

2-1 Pre-Hardware installation

Before starting to use the computer with the motherboard installing the components on it, please make sure complete the following steps:

1. To verify the settings of your motherboard
2. To install the CPU
3. To install the system memory
4. To install the expansion cards
5. To connect with ribbon cables, panel wires, and power supply
6. To setup BIOS
7. To install software driver & utility

2-2 To verify the jumper settings of the motherboard

(1) CPU Front Side Bus Frequency Setting (2x2-pin) : JP3, JP4

JP3	JP4	CPU CLK	
OFF	ON	100MHz	
OFF	OFF	133MHz	(Default)
ON	OFF	166MHz	
ON	ON	200MHz	
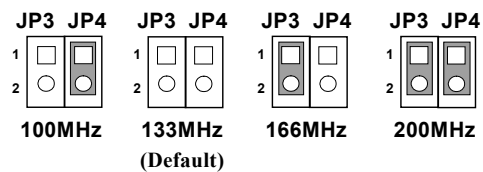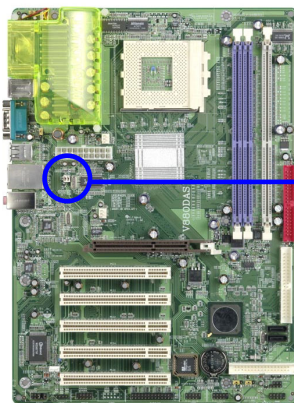
CPU Front Side Bus Frequency Setting

(2) Keyboard/USB Power On function Enabled/Disabled: JP1/ JP2, JP6

When setting Enabled you can using keyboard by key in password/ USB Device to power on system.

JP1 [1 3] 1-2 closed K/B Power ON Disable (Default)

JP1 [1 3] 2-3 closed K/B Power ON Enabled

Keyboard Power On Setting

JP2 [1 3]

JP2 [1 3]

JP6 [1 3] 1-2 closed USB Power On Disable (Default)

JP6 [1 3] 2-3 closed USB Power On Enabled

USB Power On Setting
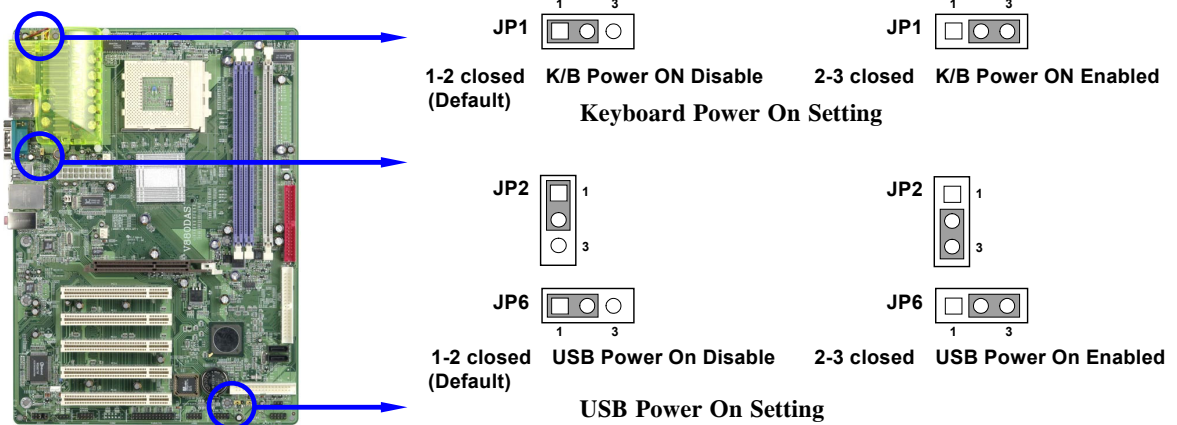
(3) CMOS RAM Clear (3-pin) : JBAT

A battery must be used to retain the motherboard configurations in CMOS RAM. To close pin 1-2 of JBAT to store the CMOS data.

To clear the CMOS, follow the procedure below:
1.   Turn the system power off and unplug the AC power
2.   Remove ATX power cable from ATX power connector of the motherboard
3.   To locate JBAT and close pin 2-3 for a few seconds
4.   Return JBAT to its default setting by closing pin 1-2
5.   To connect ATX power cable with ATX power connector of the motherboard

Note: When should clear the CMOS

1. Can't remember the password setting up for BIOS

2. In any case when system boot fail

JBAT [1 3] 1-2 closed Normal (Default)

JBAT [1 3] 2-3 closed Clear CMOS

CMOS RAM Clear Setting
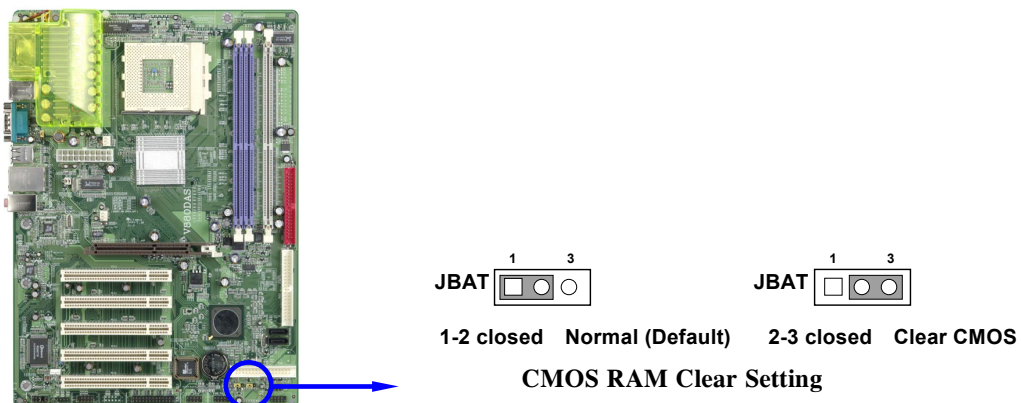
2-3 To install the CPU

2-3-1   Glossary

Chipset (or core logic) - two or more integrated circuits which control the interfaces between the system processor, RAM, I/O devises, and adapter cards.

Processor socket - the socket used to mount the system processor on the motherboard.

Slot (AGP, PCI, ISA, RAM DIMMs) - the slots used to mount adapter cards and system RAM.

AGP - **A**ccelerated **G**raphics **P**ort - the high speed interface for video cards which runs at 1X (66MHz), 2X (133MHz), 4X (266MHz), and 8X (533MHz).

PCI - **P**eripheral **C**omponent **I**nterconnect - the high speed interface for video cards, sound cards, network interface cards, and modems which runs at 33MHz.

ISA - **I**ndustry **S**tandard **A**rchitecture - the relatively low speed interface primarily used for sound cards and modems which runs at approx. 8MHz.

Serial Port - the low speed interface typically used for mouse and external modems.

Parallel Port - the low speed interface typically used for printers.

PS/2 - the low speed interface used for mouse and keyboards.

USB - **U**niversal **S**erial **B**us - the medium speed interface typically used for mouse, keyboards, scanners, and some digital cameras.

Sound (interface) - the interface between the sound card or integrated sound connectors and speakers, MIC, game controllers, and MIDI sound devices.

LAN (interface) - **L**ocal **A**rea **N**etwork - the interface links to local area network.

BIOS (**B**asic **I**nput/**O**utput **S**ystem) - the program logic used to boot up a computer and establish the relationship between various components.

Driver - software, which defines the characteristics of a device for use by another device or other software.

Processor - the "central processing unit" (CPU); the principal integrated circuit used for doing the "computing" in "personal computer"

Front Side Bus Frequency - the working frequency of the motherboard, which is generated by the clock generator for CPU, DRAM and PCI BUS.

CPU L2 Cache - the flash memory inside the CPU, normally Athlon serial CPU has 256K or above, and Duron has 64K.

2-3-2　About AMD Athlon XP & Duron 462-pin CPU

This motherboard supports Socket-A (Socket-462) AMD Athlon XP /Duron processors.

This motherboard Provides a ZIF Socket-A.　The CPU that comes with the motherboard should have a cooling fan and heatsink attached to prevent overheating. If this is not the case, then purchase a correct cooling fan with heatsink before you turn on your system.

WARNING!	Be sure that there is sufficient air circulation across the processor's heatsink, and CPU cooling FAN is working correctly. Otherwise it may cause the processor and motherboard overheat and even damage, you may install an auxiliary cooling FAN if it's necessary.

WARNING!	Due to this motherboard provides new function of CPU over-heated protection; make sure to connect the CPU FAN with the connector on CPUFAN location of the motherboard in order to obtain this feature works. Without connection with CPUFAN (or you have connected CPU FAN with FAN1), the system will shut down immediately to protect both your CPU and motherboard.

Over heat Protect: Only for Athlon XP serial CPU, when the CPU overheated, the system will auto shut down the power supply. You could hear a continual beeps, and the power button will be locked up. Users must turn off and turn on the AC power to reset the system, otherwise the power button will no function, the other way is keeping press the push button few seconds till the beeps stop, then release the power button and press the power button again to turn on the system power supply.

To install a CPU, first turn off your system and remove its cover. To locate the ZIF socket and open it by first pulling the level sideways away from the socket then upward to 90-degree. Insert the CPU with the correct orientation as shown below.　The notched corner should point toward the end of the level.　Because the CPU has a corner pin for two of the four corners, the CPU will only fit in the orientation as shown.

Colden Arrow
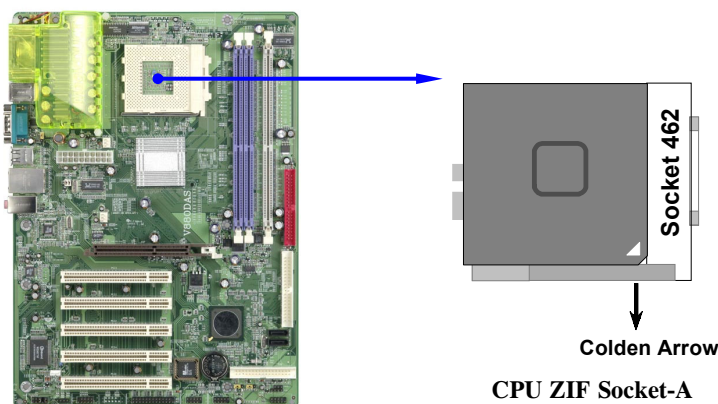
CPU ZIF Socket-A

When you put the CPU into the ZIF socket.　No force needed to insert of the CPU, then press the level to Locate position slightly without any extra force.

2-4 To install the system memory

This motherboard provides three 184-pin DUAL INLINE MEMORY MODULES (DIMM) sites for memory expansion available from minimum memory size of 64MB to maximum memory size of 3.0GB DDR SDRAM.

Valid Memory Configurations

Bank	184-Pin DIMM	PCS	Total Memory
Bank 0, 1 (DIMM1)	PC2100/PC2700/PC3200 DDR SDRAM	X1	64MB~1.0GB
Bank 2, 3 (DIMM2)	PC2100/PC2700/PC3200 DDR SDRAM	X1	64MB~1.0GB
Bank 4, 5 (DIMM3)	PC2100/PC2700/PC3200 DDR SDRAM	X1	64MB~1.0GB
Total	System Memory (Max. 3.0GB)	3	64MB~3.0GB

NOTE!   For support Dual channel function must install both DIMM1 and DIMM3 at the same time. Make sure the total installed memory does not exceed 3.0GB, otherwise the system may hang during startup.

Generally speaking, installing DDR SDRAM modules to your motherboard is very easy, you can refer to figure 2-4 to see what a 184-Pin PC2100/PC2700/PC3200 DDR SDRAM module looks like.

DIMM1 & DIMM3: Dual Channel 1

Figure 2-4
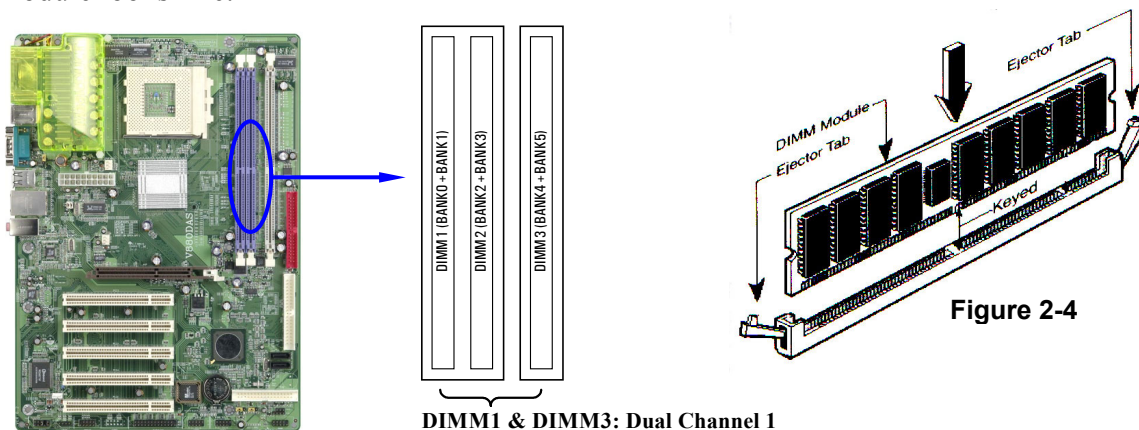
NOTE!   When you install DIMM modules fully into the DIMM sockets the eject tab should be locked into the DIMM modules firmly and fit to its indention on both sides.

WARNING! For the DDR SDRAM CLOCK is set at 166MHz, use only PC2700-compliant DDR Modules. When this motherboard operate at 133Mhz, most system will not even boot if non-compliant modules are used because of the strict timing issues, if your DDR Modules are not PC2100-compliant, set the DDR SDRAM clock to 100MHz to ensure system stability.

2-5 To install the Expansion Cards

> **WARNING!** Turn off your power when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

2-5-1 Procedure For Expansion Card Installation

1. To read documentations or manuals for your expansion cards and make any necessary hardware or software settings for your expansion card such as jumpers.
2. To remove your computer's cover and the bracket plate on the slot you intend to use.
3. To align the card's connectors and press firmly.
4. To secure the card on the slot with the screen you remove above.
5. To replace the computer system's cover.
6. To set up the BIOS if it's necessary.
7. To install the necessary software drivers for your expansion cards.

2-5-2 Assigning IRQs For Expansion Card

Some expansion cards need to assign an IRQ address to operate. Generally speaking, an IRQ address must exclusively assign to one use only. With standard factory design, there are 16 IRQs available, but most of them are already in use.

Standard Interrupt Assignments

IRQ	Priority	Standard function
0	N/A	System Timer
1	N/A	Keyboard Controller
2	N/A	Programmable Interrupt
3 *	8	Communications Port (COM2)
4 *	9	Communications Port (COM1)
5 *	6	Sound Card (sometimes LPT2)
6 *	11	Floppy Disk Controller
7 *	7	Printer Port (LPT1)
8	N/A	System CMOS/Real Time Clock
9 *	10	ACPI Mode when enabled
10 *	3	IRQ Holder for PCI Steering
11 *	2	IRQ Holder for PCI Steering
12 *	4	PS/2 Compatible Mouse Port
13	N/A	Numeric Data Processor
14 *	5	Primary IDE Channel
15 *	1	Secondary IDE Channel

* These IRQs are usually available for ISA or PCI devices.

2-5-3   Interrupt Request Table For This Motherboard

Interrupt requests are shared as shown the table below:

	INT A	INT B	INT C	INT D
PCI slot 1	Shared	—	—	—
PCI slot 2	—	Shared	—	—
PCI slot 3	—	—	Shared	—
PCI slot 4	—	—	—	Shared
PCI slot 5	Shared	—	—	—
AGP slot	Shared	—	—	—
AC97/MC97	—	—	Shared	—
Onboard USB	—	—	—	Shared
Onboard USB 1	—	—	—	Shared
Onboard USB 2	—	—	—	Shared

> **IMPORTANT!**   While using PCI cards on shared slots, make sure that the drivers support "Shared IRQ" or that the cards don't need IRQ assignments. Conflicts will arise between the two PCI groups that will make the system unstable or cards inoperable.

This motherboard provides an AGP Slot, support the 4X/8X AGP VGA card.

2x notch   4x notch

AGP SLOT
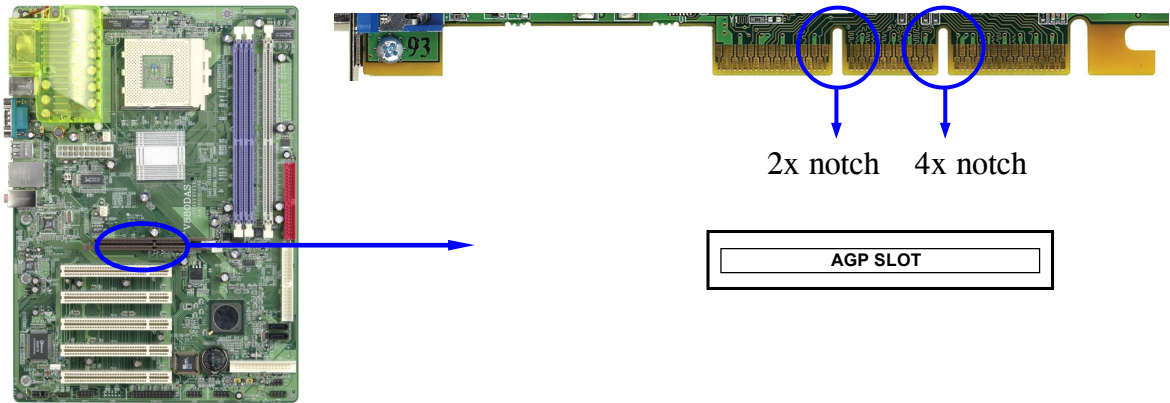
2-6 Connectors and pin headers

2-6-1 Connectors

(1) Power Connector (20-pin block) : ATXPOW

ATX Power Supply connector.   This is a new defined 20-pins connector that usually comes with ATX case. The ATX Power Supply allows to use soft power on momentary switch that connect from the front panel switch to 2-pins Power On jumper pole on the motherboard.   When the power switch on the back of the ATX power supply turns on, the full power will not come into the system board until the front panel switch is momentarily pressed.   Press this switch again will turn off the power to the system board.

← Pin 1

PIN	ROW2	ROW1
1	3.3V	3.3V
2	-12V	3.3V
3	GND	GND
4	Soft Power On	5V
5	GND	GND
6	GND	5V
7	GND	GND
8	-5V	Power OK
9	+5V	+5V (for Soft Logic)
10	+5V	+12V
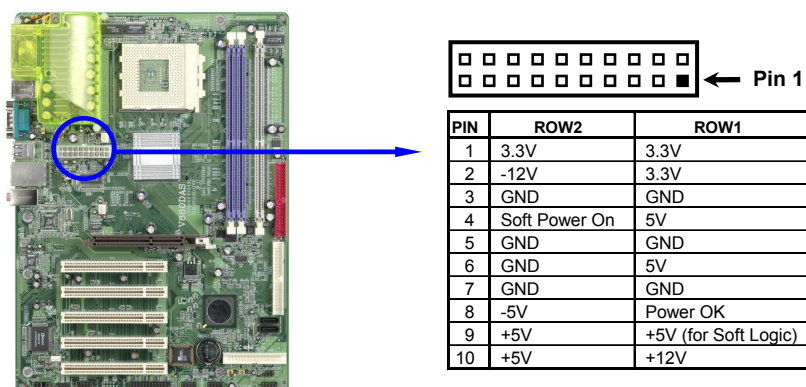
(2) PS/2 Mouse & PS/2 Keyboard Connector: J1

The connectors for PS/2 keyboard and PS/2 Mouse.

(3) USB Port connector: USB/J2

The connectors are 4-pin connector that connect USB devices to the system board.

(4) LAN Port connector: LAN (only for V880DAS)

This connector is standard RJ45 connector for Network

(5) Audio Connector : CN1

This Connector are 3 phone Jack for LINE-OUT, LINE-IN, MIC

Line-out :   Audio output to speaker

Line-in :   Audio input to sound chip

MIC :   Microphone Connector

(6) Serial Port COM1 Connector: COM1

COM1 is the 9-pin D-Subminiature mail connector. The On-board serial port can be disabled through BIOS SETUP. Please refer to Chapter 3 "INTEGRATED PERIPHERALS SETUP" section for more detail information.

PS/2 Mouse
LAN
MIC
LINE-IN
LINE-OUT
PS/2 Keyboard COM1 USB1 USB
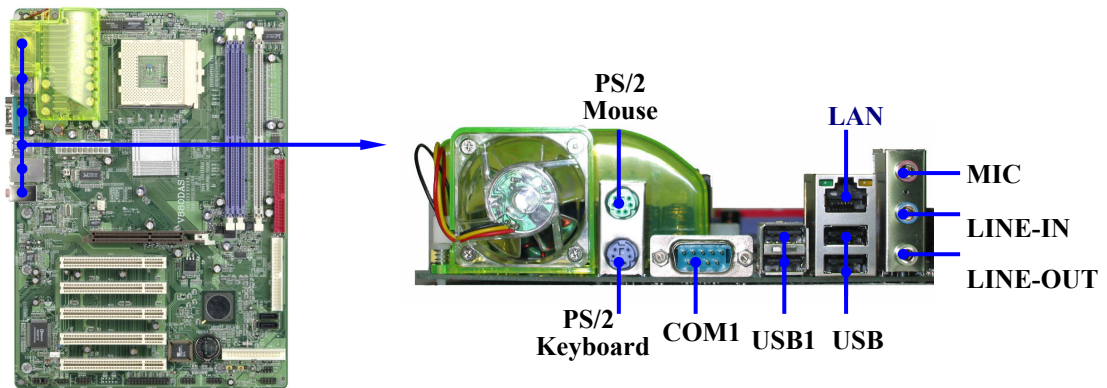
(7) Floppy drive Connector (34-pin block): FDD

This connector supports the provided floppy drive ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to the floppy drives.

FDD

Pin 1

Floppy Drive Connector
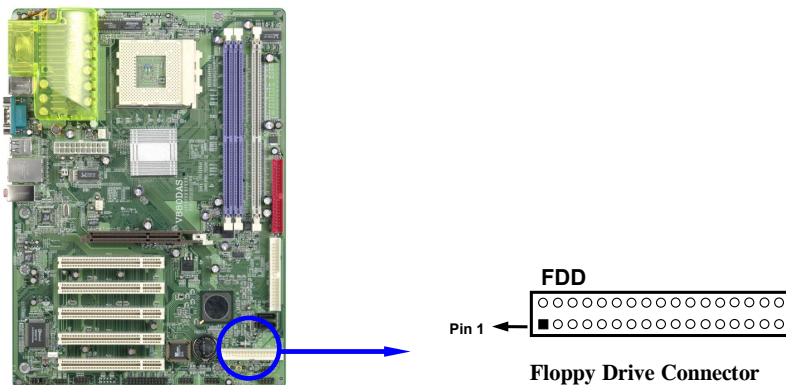
(8) Primary IDE Connector (40-pin block): IDE1

This connector supports the provided IDE hard disk ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to your hard disk(s). If you install two hard disks, you must configure the second drive to Slave mode by setting its jumpers accordingly. Please refer to the documentation of your hard disk for the jumper settings.

IDE1

Pin 1

Primary IDE Connector
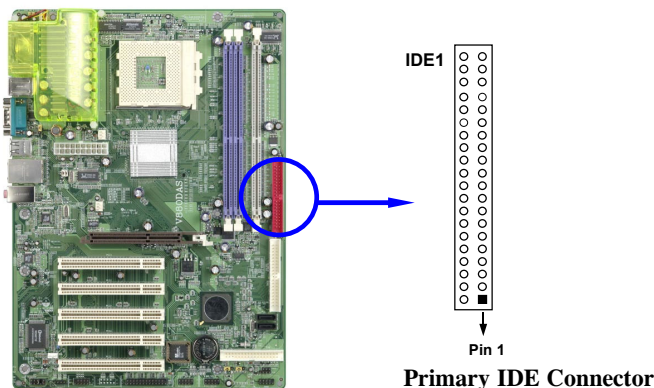
(9) Secondary IDE Connector (40-pin block): IDE2

This connector connects to the next set of Master and Slave hard disks. Follow the same procedure described for the primary IDE connector. You may also configure two hard disks to be both Masters using one ribbon cable on the primary IDE connector and another ribbon cable on the secondary IDE connector.

IDE2

Pin 1

Secondary IDE Connector
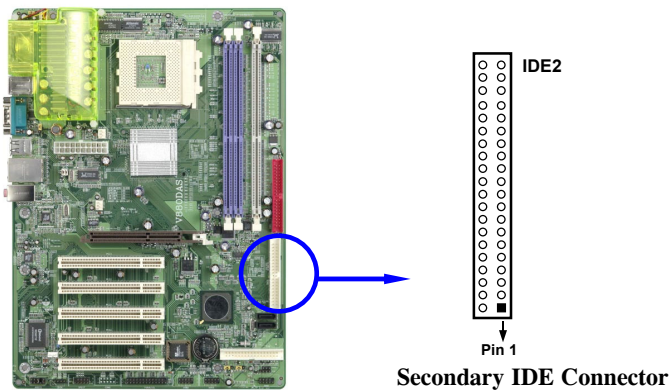
- Two hard disks can be connected to each connector. The first HDD is referred to as the "Master" and the second HDD is referred to as the "Slave".
- For performance issues, we strongly suggest you don't install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance on this channel may drop.

(10) Serial-ATA Port connector: SATA1/SATA2

This connector support the provided Serial ATA IDE hard disk cable to connecting the motherboard and serial ATA hard disk.

Pin 1

SATA2

SATA1

Serial-ATA Port Connector
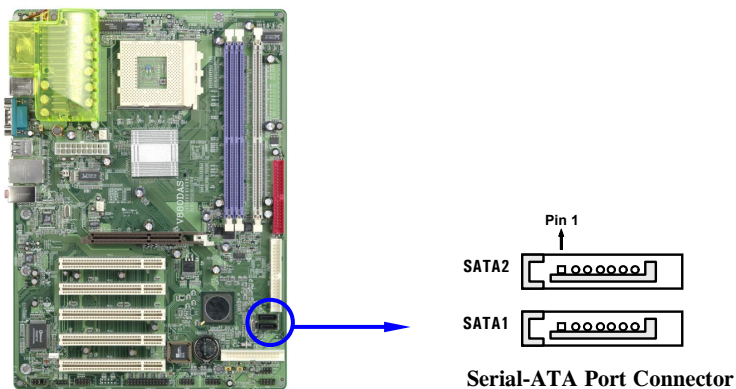
2-6-2 Pin headers

(1) Line-Out, MIC Header (9-pin): AUDIO

This header connect to Front Panel Line-out, MIC connector with cable.

AUD_GND
AUD_VCC
AUD_RET_R
AUD_RET_L

AUDIO   2   10

Pin 1   9

AUD_MIC
AUD_MIC-BIAS
AUD_FPOUT_R
HP_ON
AUD_FPOUT_L

Line-Out, MIC Headers

15
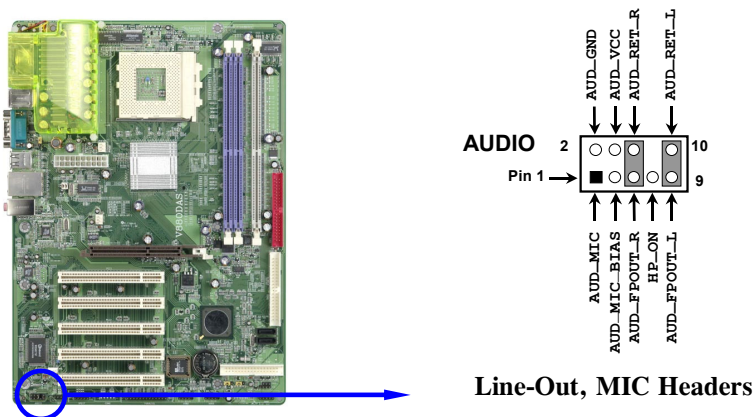
(2) USB Port Headers (9-pin) : USB2, USB3

These headers are used for connecting the additional USB port plug.   By attaching an option USB cable, your can be provided with two additional USB plugs affixed to the back panel.
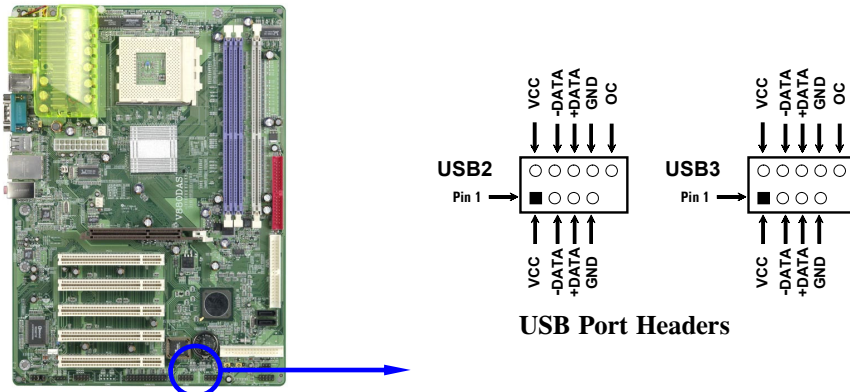
USB Port Headers

(5) Parallel Port Headers (25-pin Block): PARALLEL

Parallel Port Headers can connect with optional parallel cable which with a 25-pin D-Subminiature Receptacle connector.   The On-board Parallel Port can be disabled through the BIOS SETUP.   Please refer to Chapter 3 "INTEGRATED PERIPHERALS SETUP" section for more detail information.


Parallel Port Headers
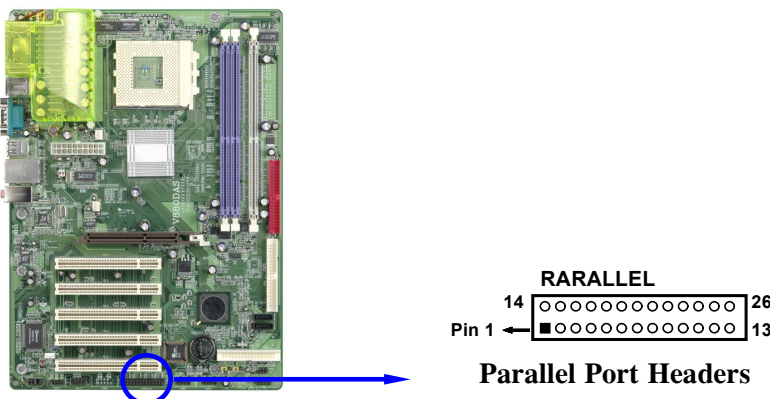
(3) IDE Activity LED: IDE LED

This connector connects to the hard disk activity indicator light on the case.

(4) Turbo LED switch: TB LED

Since the motherboard's turbo function is always on.   The turbo LED will remain constantly on while the system power is on.   You may wish to connect the Power LED from the system case to this lead.   See the figure below.

(5) Reset switch lead: RESET

This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch.   This is a preferred method of rebooting in order to prolong the lift of the system's power supply.   See the figure below.

(6) Speaker connector: SPEAKER

This 4-pin connector connects to the case-mounted speaker. See the figure below.

(7) Power LED: PWR LED

The Power LED is light on while the system power is on.   Connect the Power LED from the system case to this pin.

(8) Power switch: PW BN

This 2-pin connector connects to the case-mounted power switch to power ON/OFF the system.

PWRLED
Pin 1 →

SPEAK
Pin 1 →
SPKR NC GND VCC5

JW FP
Pin 1 →

PWR LED   PWRBTN
VCC5 PWRLED PWRBTN GND

VCC5 HDDLE GND RSTSW NC
HDLED   RESET

System Case Connections
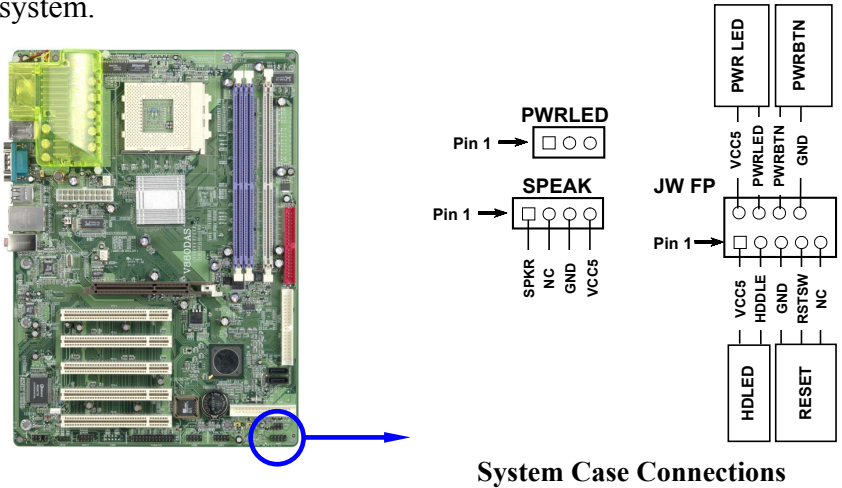
(9) Wake On-LAN Headers (3-pin) : WOL

This connector connects to a LAN card with a WAKE ON-LAN output.   This connector power up the system when a wake up signal is received through the LAN card.

NOTE: This feature requires that Wake On LAN or Ring In Wake up is enabled.

WOL   1   3

5VSB GND WOL

Wake-On-LAN Headers
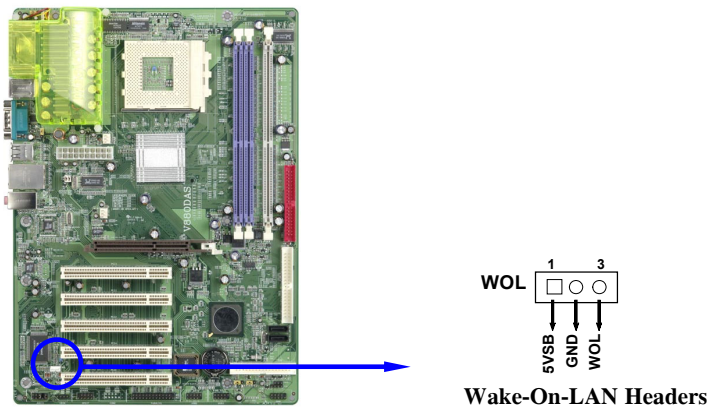
(10) FAN Speed Headers (3-pin) : SFAN1, SFAN2, CPUFAN

These connectors support cooling fans of 350mA (4.2 Watts) or less, depending on the fan manufacturer, the wire and plug may be different.   The red wire should be positive, while the black should be ground.   Connect the fan's plug to the board taking into consideration the polarity of connector.

SFAN2   1
    3

CPUFAN   1
    3

SFAN1   1
    3
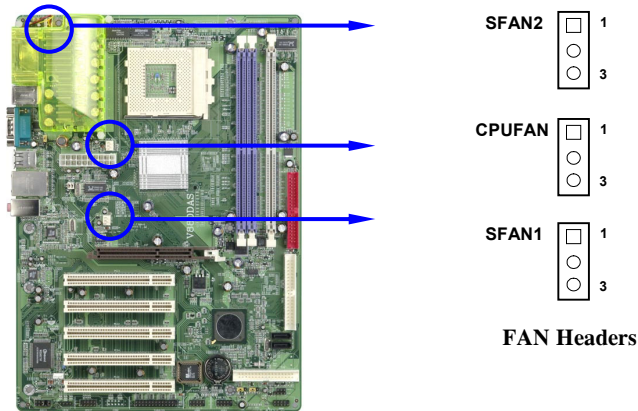
FAN Headers

(12) CD Audio-In Headers (4-pin) : CDIN

CDIN1 is the connector for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.

CDIN

1   4

CD Audio-In Headers
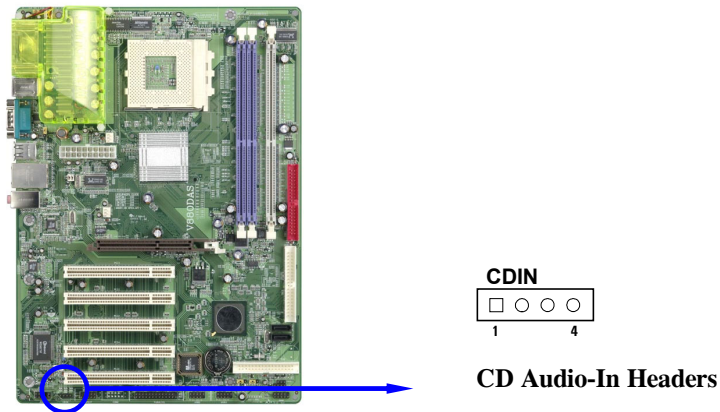
(13) SPDIF In/Out Headers (9-pin) : SPDIF

This headers is for SPDIF (Sony Philip Digital InterFace) Device In/Out connector.
Use this headers users can In put or Out put high quality digital signal from SPDIF devices to Computer or from computer to SPDIF devices.

SPDIF

SPDIF-OUT
GND
GENTER
GND

2   10
Pin 1 →   9

12V
SURROUND-L
SURROUND-R
SPDIF-IN
BASS

SPDIF In/Out Headers
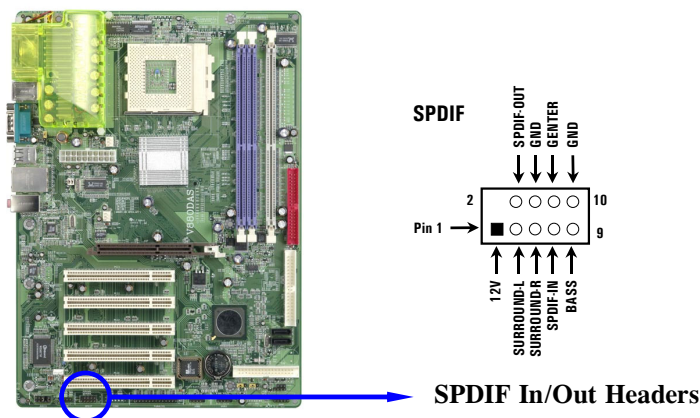
2-7 Starting up your computer

1. After all connection are ready, close your computer case cover.
2. Be sure all the switches are off, and check that the power supply input voltage is set to proper position, usually in-put voltage is 220V~240V or 110V~120V depending on your country's voltage used.
3. Connect the power supply cord into the power supply located on the back of your system case according to your system user's manual.
4. Turn on your peripherals as following order:
   a. Your monitor.
   b. Other external peripherals (Printer, Scanner, External Modem etc…)
   c. Your system power. For ATX power supplies, you need to turn on the power supply and press the ATX power switch on the front side of the case.
5. The power LED on the front panel of the system case will light. The LED on the monitor may light up or switch between orange and green after the system is on. If it complies with green standards or if it is has a power standby feature. The system will then run power-on test. While the test are running, the BIOS will alarm beeps or additional message will appear on the screen.

   If you do not see any thing within 30 seconds from the time you turn on the power. The system may have failed on power-on test. Recheck your jumper settings and connections or call your retailer for assistance.

Beep	Meaning
One short beep when displaying logo	No error during POST
Long beeps in an endless loop	No DRAM install or detected
One long beep followed by three short beeps	Video card not found or video card memory bad
High frequency beeps when system is working	CPU overheated System running at a lower frequency

6. During power-on, press <Delete> key to enter BIOS setup. Follow the instructions in BIOS SETUP.

7. **Power off your computer:** You must first exit or shut down your operating system before switch off the power switch. For ATX power supply, you can press ATX power switching after exiting or shutting down your operating system. If you use Windows 9X, click **"Start"** button, click **"Shut down"** and then click **"Shut down the computer?"** The power supply should turn off after windows shut down.

Chapter 3

Introducing BIOS Settings

The BIOS is a program located on a Flash Memory of the motherboard. Using this program as a bridge between motherboard and operating system. When the computer starting to work, the BIOS program gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

In the BIOS Setup main menu of Figure 3-1, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press <Esc> to quit the BIOS Setup.

- Press ↑↓←→ (up, down, left, right) to choose, in the main menu, the option you want to confirm or to modify.

- Press <F10> when you have completed the setup of BIOS parameters to save these parameters and to exit the BIOS Setup menu.

- Press Page Up/Page Down or +/– keys when you want to modify the BIOS parameters for the active option.

3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter BIOS Setup. If the message disappears before your respond and you still wish to enter BIOS Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

Press <F1> to continue, <Ctrl-Alt-Esc> or <Del> to enter Setup

3-2 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

3-3 The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 3-1) will appear on the screen. The Main Menu allows you to select from fourteen setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

```
         CMOS Setup Utility – Copyright(C) 1984-2004 Award Software
 ┌─────────────────────────────────────────────────────────────────────┐
 │                                                                       │
 │   Standard CMOS Features          Miscellaneous Control               │
 │                                                                       │
 │   Advanced BIOS Features          Load optimized Defaults             │
 │                                                                       │
 │   Advanced Chipset Features       Load Standard Defaults              │
 │                                                                       │
 │   Integrated Peripherals          Set Supervisor Password             │
 │                                                                       │
 │   Power Management Setup           Set User Password                   │
 │                                                                       │
 │   PnP/PCI Configurations          Save & Exit Setup                   │
 │                                                                       │
 │   PC Health Status                Exit Without Saving                 │
 ├─────────────────────────────────────────────────────────────────────┤
 │   Esc : Quit                      ↑↓→← : Select Item                   │
 │                                                                       │
 │   F10 : Save & Exit Setup                                             │
 ├─────────────────────────────────────────────────────────────────────┤
 │                   Time, Date, Hard Disk Type...                       │
 └─────────────────────────────────────────────────────────────────────┘
                              Figure 3-1
```

Standard CMOS Features

Use this Menu for basic system configurations.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP/PCI configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This entry shows your PC health status.

Miscellaneous Control

Use this menu to specify your settings for Miscellaneous control.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performances system operations.

Load Standard Defaults

Use this menu to load the BIOS default values for the minimal/stable performance system operation.

Set Supervisor/User Password

Use this menu to set User and Supervisor Passwords.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3-4 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into several categories.   Each category includes no, one or more than one setup items.   Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

```
            CMOS Setup Utility – Copyright(C) 1984-2004 Award Software
                              Standard CMOS Features
┌─────────────────────────────────────────────────────────┬──────────────────────┐
│    Date (mm:dd:yy)        Thu, Aug, 12 2004               │                      │
│    Time (hh:mm:ss)        16 : 45 : 35                    │     Item Help        │
│  > IDE Primary Master     Press Enter None                ├──────────────────────┤
│  > IDE Primary Slave      Press Enter None                │                      │
│  > IDE Secondary Master   Press Enter None                │  Menu Level >        │
│  > IDE Secondary Slave    Press Enter None                │                      │
│    Drive A                1.44M, 3.25 in.                 │                      │
│    Video                  EGA/VGA                         │  Change the day, month,
│    Halt On                All,But Keyboard                │  year and century    │
│    Base Memory                   640K                     │                      │
│    Extended Memory             56320K                     │                      │
│    Total Memory                57344K                     │                      │
│                                                           │                      │
├─────────────────────────────────────────────────────────┴──────────────────────┤
│         ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│              F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults   │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Date
The date format is <day><month><date><year>.
> **Day**   Day of the week, from Sun to Sat, determined by BIOS. Read-only.
> **Month** The month from Jan. through Dec.
> **Date**   The date from 1 to 31 can be keyed by numeric function keys.
> **Year**   The year depends on the year of the BIOS.

Time
The time format is <hour><minute><second>.

Primary Master/Primary Slave
Secondary Master/Secondary Slave
Press PgUp/<+> or PgDn/<–> to select Manual, None, Auto type.   Note that the specifications of your drive must match with the drive table.   The hard disk will not work properly if you enter improper information for this category.   If your hard disk drive type is not matched or listed, you can use Manual to define your own drive type manually.
If you select Manual, related information is asked to be entered to the following items. Enter the information directly from the keyboard.   This information should be provided in the documentation from your hard disk vendor or the system manufacturer.
If the controller of HDD interface is SCSI, the selection shall be "None".
If the controller of HDD interface is CD-ROM, the selection shall be "None"
Access Mode The settings are Auto Normal, Large, and LBA.
Cylinder   number of cylinders
Head   number of heads
Precomp   write precomp
Landing Zone   landing zone
Sector   number of sectors

23

3-5 Advanced BIOS Features

Anti-Virus Protection	Disabled	Item Help
CPU L1 Cache	Enabled	
CPU L2 Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Flop	Menu Level >
Second Boot Device	HDD-0	
Third Boot Device	CDROM	
Boot other Device	Enabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Normal	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD for Windows	Yes	
Video BIOS Shadow	Enabled	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

Anti-Virus Protection

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Disabled (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU L1 Cache

The default value is Enabled.

Enabled (default) Enable cache

Disabled Disable cache

Note: The internal cache is built in the processor.

CPU L2 Cache

Choose Enabled or Disabled.   This option enables the Level 2 cache memory.

Quick Power On Self-Test

This category speeds up Power On Self Test (POST) after you power on the computer.   If this is set to Enabled.   BIOS will shorten or skip some check items during POST.

Enabled (default) Enable quick POST

Disabled Normal POST

First/Second/Third/Fourth Boot Device
The BIOS attempts to load the operating system from the devices in the sequence selected in these items.   The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-3, SCSI, CDROM, LAD and Disabled.

Boot Up Floppy Seek
During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Boot Up NumLock Status
The default value is On.
> **On** (default)   Keypad is numeric keys.
> **Off**   Keypad is arrow keys.

Gate A20 Option
> **Normal**   The A20 signal is controlled by keyboard controller or chipset hardware.
> **Fast** (default) The A20 signal is controlled by port 92 or chipset specific method.

Typematic Rate Setting
Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.   The settings are: Enabled/Disabled.

Typematic Rate (Chars/Sec)
Sets the number of times a second to repeat a keystroke when you hold the key down.   The settings are: 6, 8, 10, 12, 15, 20, 24, and 30.

Typematic Delay (Msec)
Sets the delay time after the key is held down before is begins to repeat the keystroke.   The settings are 250, 500, 750, and 1000.

Security Option
This category allows you to limit access to the system and Setup, or just to Setup.
> **System**   The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
> **Setup** (default) The system will boot, but access to Setup will be denied if the correct password is not entered prompt.

OS Select For DRAM > 64MB
Allows OS2® to be used with >64MB or DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2®.

3-6 Advanced Chiset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers.   These registers control most of the system options in the computer.

```
CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                   Advanced Chipset Features
┌─────────────────────────────────────────────────────────────────────────┐
│  > DRAM Timing Settings      Press Enter  │                               │
│  > AGP Timing Settings       Press Enter  │          Item Help            │
│  > PCI Timing Settings       Press Enter  ├───────────────────────────────┤
│    System BIOS Cacheable     Disabled     │  Menu Level >                 │
│    Video RAM Cacheable       Disabled     │                               │
│    Memory Hole               Disabled     │                               │
│                                           │                               │
│                                           │                               │
│                                           │                               │
│                                           │                               │
├───────────────────────────────────────────────────────────────────────────┤
│      ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│         F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults │
└───────────────────────────────────────────────────────────────────────────┘
```

DRAM Timing Settings

Please refer to section 3-6-1

AGP Timing Settings

Please refer to section 3-6-2

PCI Timing Settings

Please refer to section 3-6-3

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.   However, if any program writes to this memory area, a system error may result.   The settings are: Enabled and Disabled.

Video RAM Cacheable

Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

Memory Hole

You can reserve this area of system memory for ISA adapter ROM.   When this area is reserved, it cannot be cached.   The user information of peripherals that need to use this area of system memory usually discusses their memory requirements. The settings are: Enabled and Disabled.

3-6-1   DRAM Timing Settings

Auto Configuration	By SPD	Item Help
x RAS Active Time	7T	
x RAS Precharge Time	3T	
x RAS to CAS Delay	3T	Menu Level >>
CAS Latency	2.5T	
Bank Interleave	4 Bank	
DRAM Command Rate	2T Command	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

RAS Active Time

This field let's you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed.   *Fast* gives faster performance; and *Slow* gives more stable performance.   This field applies only when synchronous DRAM is installed in the system.   The settings are: 2T and 3T.

RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain date.   *Fast* gives faster performance; and *Slow* gives more stable performance.   This field applies only when synchronous DRAM is installed in the system.   The settings are: 2T and 3T.

CAS Latency

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.   The settings are: 2T and 2.5T.

3-6-2 AGP Timing Settings

CMOS Setup Utility - Copyright(C) 1984-2004 Award Software

AGP Timing Settings

AGP Transfer Aperture Size	64M	Item Help
AGP Mode	Auto	
AGP Driving Control	Auto	
x AGP Driving Value	DA	Menu Level >>
AGP Fast Write	Disabled	
AGP Master 1 WS Write	Enabled	
AGP Master 1 WS Read	Enabled	
CPU to AGP Post Write	Enabled	
AGP Delay Transaction	Enabled	
AGP 3.0 Calibration Cycle	Disabled	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

Note: Change these settings only if you are familiar with the chipset.

3-6-3 PCI Timing Settings

CMOS Setup Utility - Copyright(C) 1984-2004 Award Software

PCI Timing Settings

PCI Master 1 WS Write	Disabled	Item Help
PCI Master 1 WS Read	Disabled	
CPU to AGP Post Write	Enabled	Menu Level >>
PCI Delay Transaction	Disabled	
Vlink 8X Support	Enabled	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.   The settings are: Enabled and Disabled.

3-7 Integrated Peripherals

```
> OnChip IDE Function        Press Enter                Item Help
> OnChip Device Function     Press Enter
> Onboard Super IO Function  Press Enter
  Init Display First         PCI Slot                   Menu Level >




↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
     F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults
```

OnChip IDE Function

Please refer to section 3-7-1

OnChip Device Function

Please refer to section 3-7-2

Onboard Super IO Function

Please refer to section 3-7-3

Init Display First

This item allows you to decide to activate whether PCI Slot or AGP VGA first.   The settings are: PCI Slot, AGP Slot.

3-7-1   OnChip IDE Function

```
              CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                                OnChip IDE Function
┌─────────────────────────────────────────────────────┬─────────────────────────┐
│ OnChip IDE Channel0          Enabled                  │                         │
│ OnChip IDE Channel1          Enabled                  │        Item Help        │
│ Primary Master    PIO        Auto                     ├─────────────────────────┤
│ Primary Slave     PIO        Auto                     │                         │
│ Secondary Master PIO         Auto                     │  Menu Level >>          │
│ Secondary Slave  PIO         Auto                     │                         │
│ Primary Master    UDMA       Auto                     │                         │
│ Primary Slave     UDMA       Auto                     │                         │
│ Secondary Master UDMA        Auto                     │                         │
│ Secondary Slave  UDMA        Auto                     │                         │
│ IDE HDD Block Mode           Enabled                  │                         │
│ Delay For HDD (Secs)           0                      │                         │
├─────────────────────────────────────────────────────┴─────────────────────────┤
│       ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│            F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults   │
└────────────────────────────────────────────────────────────────────────────────┘
```

OnChip IDE Channal0/Channel1

The integrated peripheral controller contains an IDE interface with support for two IDE channels.   Select *Enabled* to activate each channel separately.   The settings are: Enabled and Disabled.

Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports.   Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.   The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver).   If your hard drive and your system software both support Ultra DMA/33 and Ultra DMA/66, select Auto to enable BIOS support.   The settings are: Auto, Disabled.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.   The settings are: Enabled, Disabled.

3-7-2   OnChip Device Function

CMOS Setup Utility – Copyright(C) 1984-2004 Award Software
OnChip Device Function

```
VIA LAN Function            Enabled     ⎫  ← (Only for V880DAS)
VIA LAN Boot ROM            Disabled    ⎭
AC97 Sound Device           Auto
VIA LAN BootROM Boot Option Hook IN T19           Menu Level ≫
VIA LAN BootROM PXEPRL Option PXE
Current VIA MAC Address is  003018-654321
VIA LAN MAC Address Input   Press Enter
USB Host Controller         Enabled
USB Keyboard Legacy Support Disabled
USB 2.0 Support             Enabled
```

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

AC97 Sound Device
This item allows you to decide to enable/disable the chipset family to support AC97 Audio.
The settings are: Enabled, Disabled.

USB Host Controller
Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have
a USB peripherals.   The settings are: Enabled, Disabled.

USB Keyboard Support
Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have
a USB keyboard.   The settings are: Enabled, Disabled.

3-7-3   Onboard Super IO Function

```
          CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                          Onboard Super IO Function
┌─────────────────────────────────────────────────┬───────────────────────┐
│  Onboard FDD Controller        Enabled           │                       │
│  Onboard Serial Port 1         3F8/IRQ4          │      Item Help        │
│                                                   ├───────────────────────┤
│  Onboard Parallel Port         378/IRQ7          │                       │
│  Parallel Mode                 SPP               │   Menu Level >>       │
│  EPP Mode Select               EPP1.7            │                       │
│  ECP Mode Use DMA              3                 │                       │
│                                                   │                       │
│                                                   │                       │
│                                                   │                       │
│                                                   │                       │
│                                                   │                       │
│                                                   │                       │
├─────────────────────────────────────────────────┴───────────────────────┤
│   ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│        F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults   │
└───────────────────────────────────────────────────────────────────────────┘
```

Onboard FDD Controller

Select Enabled if your system has a floppy disk controller (FDD) installed on the system board and you wish to use it.   If you install add-on FDC or the system has no floppy drive, select Disabled in this field.   The settings are: Enabled and Disabled.

Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and the second serial ports.   The settings are: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

UART2 Mode

This item allows you to determine which InfraRed(IR) function of the onboard I/O chip, this functions uses.

Onboard Parallel Port

There is a built-in parallel port on the on-board Super I/O chipset that Provides Standard, ECP, and EPP features. It has the following option:

    Disabled
    (3BCH/IRQ7)/   Line Printer port 0
    (278H/IRQ5)/   Line Printer port 2
    (378H/IRQ7)   Line Printer port 1

Parallel Port Mode

    SPP : Standard Parallel Port
    EPP : Enhanced Parallel Port
    ECP : Extended Capability Port

SPP/EPP/ECP/ECP+EPP

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the EPP modes simultaneously, choose "EPP." By choosing "ECP", the onboard parallel port will operate in ECP mode only. Choosing "ECP+EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: "ECP Mode Use DMA" at this time, the user can choose between DMA channels 3 to 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "EPP Mode Select." At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

3-8 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy saving while operating in a manner consistent with your own style of computer use.

```
       CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                          Power Management Setup
┌─────────────────────────────────────────────────────────────────────────┐
│   ACPI Function              Enabled                                      │
│   ACPI Support Type          S1(POS)                 Item Help           │
│   Power Management Option     User Define                                 │
│   HDD Power Down             Disabled                                     │
│   Suspend Mode                                      Menu Level >          │
│   Video Off Option            Suspend -> off                              │
│   Video off Method            V/H SYNC+Blank                              │
│   MODEM Use IRQ               3                                           │
│   Power Button Function       Instant-Off                                 │
│   State After Power Failure   Auto                                        │
│ > Wake Up Events              Press Enter                                 │
│                                                                           │
├───────────────────────────────────────────────────────────────────────── ┤
│    ↑↓→←  Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help│
│        F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults │
└─────────────────────────────────────────────────────────────────────────┘
```

ACPI Function

This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI). The settings are Enabled and Disabled.

Video Off Option

This determines the manner in which the monitor is blanked. The choice are Suspend → off, All Modes → Off, and Always On.

Video Off Method

This determines the manner in which the monitor is blanked.

    DPMS (default)   Initial display power management signaling.

    Blank Screen   This option only writes blanks to the video buffer.

    V/H SYNC+Blank   This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Modem Use IRQ

This determines the IRQ in which the MODEM can use.

The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

Power Button Function

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state.　The settings are: Delay 4 Sec, Instant-Off.

State After Power Failure

This item allows the system power ON/OFF automatic when power loss and recovery again, you can choose Auto for recovery pre-state, or always ON/OFF after power recovery.

Wake Up Events

Please refer to section 3-8-1

3-8-1　　Wake up Events

CMOS Setup Utility - Copyright(C) 1984-2004 Award Software

Wake Up Events

VGA	OFF	Item Help
LPT & COM	LPT/COM	
HDD & FDD	ON	
PCI Master	OFF	Menu Level >>
Wake-Up on LAN/Ring	Disabled	
Wake-Up on PCI PME	Disabled	
Wake-Up On Hot Key (PS2 KB)	Disabled	
RTC Alarm Resume	Disabled	
x Date of Month Alarm	0	
x Time (hh:mm:ss) Alarm	0 : 0 : 0	
> IRQs Activities	Press Enter	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

Wake Up On Ring/PME

During Disabled, the system will ignore any incoming call from the modem. During Enabled, the system will boot up if there's an incoming call from the modem.

Wake-Up on RTC Alarm

This function is for setting date and time for your computer to boot up.   During Disabled, you cannot use this function.   During Enabled, choose the Date and Time Alarm:

> **Date(of month) Alarm**
>
> You can choose which month the system will boot up.   Set to 0, to boot every day.
>
> **Time(hh:mm:ss) Alarm**
>
> You can choose what hour, minute and second the system will boot up.
>
> **Note:**   If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

IRQs Activities

Please refer to section 3-8-1.1

3-8-1.1   IRQs Activities

CMOS Setup Utility – Copyright(C) 1984-2004 Award Software
IRQs Activities

Primary INTR	ON	Item Help	
IRQ3 (COM 2)	Enabled		
IRQ4 (COM 1)	Enabled		
IRQ5 (LPT 2)	Enabled	Menu Level >>>	
IRQ6 (Floppy Disk)	Enabled		
IRQ7 (LPT 1)	Enabled		
IRQ8 (RTC Alarm)	Disabled		
IRQ9 (IRQ2 Redir)	Disabled		
IRQ10 (Reserved)	Disabled		
IRQ11 (Reserved)	Disabled		
IRQ12 (PS/2 Mouse)	Enabled		
IRQ13 (Coprocessor)	Disabled		
IRQ14 (Hard Disk)	Enabled		
IRQ15 (Reserved)	Disabled		
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help			
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults			

3-9 PnP/ PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

```
              CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                              PnP/PCI Configurations
┌────────────────────────────────────────────────────────────────────────────┐
│  PnP OS Installed          No                │                               │
│  Reset Configuration Data  Disabled          │          Item Help            │
│                                              ├───────────────────────────────│
│                                              │                               │
│  Resources Controlled By   Manual            │  Menu Level >                 │
│ x IRQ Resources            Press Enter       │                               │
│                                              │                               │
│                                              │                               │
│  PCI/VGA Palette Snoop      Disabled         │                               │
│  Assign IRQ For VGA         Enabled          │                               │
│  Assign IRQ For USB         Enabled          │                               │
├────────────────────────────────────────────────────────────────────────────│
│        ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│            F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults │
└────────────────────────────────────────────────────────────────────────────┘
```

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.   The settings are: Enabled and Disabled.

Resource Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices.   However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98.   If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a ">").

The settings are: Auto(ESCD), Manual.

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

Please refer to section 3-9-1

PCI/VGA Palette Snoop

Leave this field at *Disabled.*   The settings are Enabled, Disabled.

3-9-1   IRQ Resources

IRQ Resources

IRQ3 assigned to	PCI Device	Item Help
IRQ4 assigned to	PCI Device	
IRQ5 assigned to	PCI Device	
IRQ7 assigned to	PCI Device	Menu Level >>
IRQ9 assigned to	PCI Device	
IRQ10 assigned to	PCI Device	
IRQ11 assigned to	PCI Device	
IRQ12 assigned to	PCI Device	
IRQ14 assigned to	PCI Device	
IRQ15 assigned to	PCI Device	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

3-10 PC Health Status

This section shows the Status of you CPU, Fan, Warning for overall system status.   This is only available if there is Hardware Monitor onboard.

PC Health Status

Shutdown Temperature	Disabled	Item Help
Show PC Health in Post	Enabled	
Smart CPUFAN Temperature	45°C/91°F	
Smart SYSFAN1 Temperature	33°C/91°F	
Smart MagicDUCT SFAN2 Temperature	31°C/125°F	Menu Level >
CPUFAN Speed	3500 rpm	
SYSFAN1 Speed	0 rpm	
MagicDUCT SFAN2 Speed	4000 rpm	
Vcore	1.78V	
VddQ	1.25V	
VDIM	2.50V	
+12V(V)	12.22V	
Vcc5(V)	4.98V	
VBAT(V)	3.21V	
5VSB(V)	5.02V	
Smart SYSFAN1 Temperature	Disabled	
SYSFAN1 Tolerance Value	Disabled	
Smart CPUFAN Temperature	Disabled	
CPUFAN Tolerance Value	Disabled	
Smart MagicDUCT SFAN2 Temperature	Disabled	
MagicDUCT SFAN2 Tolerance Value	Disabled	

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

Shutdown Temperature

This item can let users setting the Shutdown temperature, when CPU temperature over this setting the system will auto shutdown to protect CPU.

Show PC Health in Post
During Enabled, it displays information list below.　The choice is either Enabled or Disabled.
Smart CPUFAN/SYSFAN1/MagicDUCT Temperature/ CPUFAN, SYSFAN1,
MagicDUCT SFAN1 Speed/Vcore/ VddQ/+5V/+12V/VBAT(V)/5VSB(V)
This will show the CPU/FAN/System voltage chart and FAN Speed.
Smart CPUFAN/SYSFAN1/MagicDUCT SFAN2 Temperature
This is the special function for control the fan's speed in this motherboard.
The Settings are Disabled, **30℃/86°F, 35°C/95°F**, **40°C/104°F**. Default setting is Disabled.
When Setting Disabled the FAN will running in full speed. If setting in 30°/35°/40℃, but the CPUFAN/ SYSFAN1/ MagicDUCT SFAN2 temperature is under this value the FAN will running in 70%/80%/90% of full speed, users can setting the value depend on system requirement. Suggest setting in Disabled let FAN running in full speed to solve the thermal problem and cooling down the system/CPU temperature for more stable when CPU working.

3-11 Miscellaneous Control

This section is for setting CPU Frequency/Voltage Control.

```
        CMOS Setup Utility - Copyright(C) 1984-2004 Award Software
                          Miscellaneous Control
┌──────────────────────────────────────────────┬─────────────────────┐
│  Auto Detect DIMM/PCI Clk        Enabled      │                     │
│  Spread Spectrum                 Disabled     │      Item Help       │
│  ** Current Host Clock is 133/33MHz **        ├─────────────────────┤
│  Host/PCI Clock at Next Boot is   133MHz/33MHz│                     │
│  ** Current DRAM Clock is 166MHz **           │   Menu Level >       │
│  DRAM Clock at next Boot is       By SPD      │                     │
│  CPU Vcore Select                 Default     │                     │
│  VDIMM Select                     2.5V (Default) │                   │
│  AGP VddQ Select                  1.5V (Default) │                   │
│  VCC2.5 Select                    2.5V (Default) │                   │
│                                               │                     │
├──────────────────────────────────────────────┴─────────────────────┤
│      ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│          F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults    │
└─────────────────────────────────────────────────────────────────────┘
```

Auto Detect DIMM/PCI Clk
This item allows you to enable/disable auto detect DIMM/PCI Clock.
Spread Spectrum
This item allows you to set the CPU Host/PCI clock and Spread Spectrum.
The settings are: Enabled, Disabled.
Host Clock at next Boot is
This item allows you to select CPU frequency step by step increasing
The choice are: 100MHz~132MHz, 133MHz~165MHz, 166MHz~255MHz.
DRAM Clock at next Boot is
This field displays the capability of the memory modules that you can use The choice is either 100MHz or 133MHz or 166MHz or 200MHz.
AGP VddQ Select
This item allows you to select 1.5V of the AGP 4X/8X VGA card. The choice are: 1.5V, 1.6V.
VDIMM Select
This item allows you to select 2.5V of the DDR Module. The choice are: 2.5V, 2.6V, 2.7V, 2.8V.

3-12 Load Standard/Optimized Defaults

Load Standard Defaults

When you press <Enter> on this item, you get confirmation dialog box with a message similar to:

Load Standard Defaults (Y/N)? N

Pressing <Y> loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing <Y> loads the default values that are factory settings for optimal performance system operations.

3-13 Set Supervisor/User Password

You can set either supervisor or user password, or both of them.   The differences are:

Supervisor password: Can enter and change the options of the setup menus.

User password: Can only enter but do not have the right to change the options of the setup menus.   When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>.   The password typed now will clear any previously entered password from CMOS memory.   You will be asked to confirm the password.   Type the password again and press <Enter>.   You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password.

A message will confirm that the password will be disabled.   Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup.   This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted.   This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option.   If the Security option is set to "System", the password will be required both at boot and at entry to Setup.   If set to "Setup", prompting only occurs when trying to enter Setup.

Chapter 4

DRIVER & FREE PROGRAM INSTALLATION

Check your package and there is A MAGIC INSTALL CD included. This CD consists of all DRIVERS you need and some free application programs and utility programs. In addition, this CD also include an auto detect software which can tell you which hardware is installed, and which DRIVERS needed so that your system can function properly. We call this auto detect software MAGIC INSTALL.

MAGIC INSTALL supports WINDOWS 9X/NT/2K/XP

Insert CD into your CD-ROM drive and the MAGIC INSTALL Menu should appear as below. If the menu does not appear, double-click MY COMPUTER / double-click CD-ROM drive or click START / click RUN / type X:\SETUP.EXE (assuming X is your CD-ROM drive).

From MAGIC INSTALL MENU you may make 10 selections:

1. VIA 4 IN 1   install VIA Service Pack 4 IN 1 driver
2. SOUND   install AC97 Audio Codec Installing driver
3. LAN   install VIA LAN Controller driver **(for V880DAS)**
4. USB2.0   install USB 2.0 driver
5. SATA   install VIA Serial ATA driver
6. PC-CILLIN   install PC-CILLIN2004 anti-virus program
7. PC-HEALTH   install Winbond PC-HEALTH hardware monitor Software
8. MBIOS&DX9   install BIOS Live Update Utility & Microsoft DirectX 9 driver
9. BROWSE CD   to browse the contents of the CD
10. EXIT   to exit from MAGIC INSTALL menu

4-1 VIA 4IN1　Install VIA Service Pack 4 IN 1 Driver

*　　The path of the file is X:\VIA\DRIVER\VIAHyperion4in1xxx.exe

IDE :　　　　　　VIA ATAPI VENDOR SUPPORT DRIVER IS USED TO FIXED COMPATIBILITY
　　　　　　　　　ISSUE FOR IDE DEVICES

AGPVXD :　　　　VIA AGPVXD DRIVER IS TO BE INSTALLED, IF YOU ARE USING AN AGP
　　　　　　　　　VGA CARD, VIAGART.VXD WILL PROVIDE SERVICE ROUTINES TO YOUR
　　　　　　　　　VGA DRIVER AND INTERFACE DIRECTLY TO HARDWARE, PROVIDING
　　　　　　　　　FAST GRAPHIC ACCESS

IRQ ROUTING :　VIA PCI IRQ MINIPORT DRIVER IS TO BE INSTALLED UNDER WIN98 ONLY,
　　　　　　　　　IT WILL FIX PCI IRQ ROUTING SEQUENCE

INF :　　　　　　VIA REGISTRY DRIVER IS TO BE INSTALLED UNDER WINDOWS
　　　　　　　　　THE DRIVER WILL ENABLE VIA POWER MANAGERMENT CONTROLLER

1.　Click IDE when MAGIC INSTALL MENU appears	2.　Click NEXT when VIA Service Pack Wizard appears
3.　Select normal installation , click NEXT	4.　Click NEXT to choose all driver
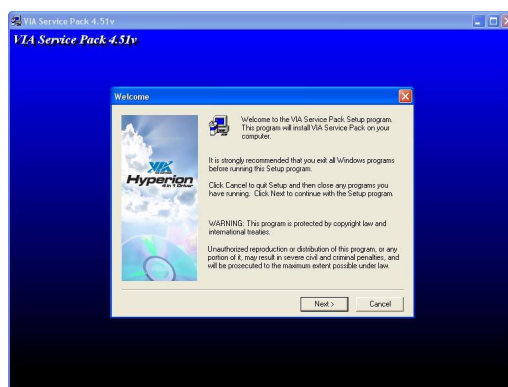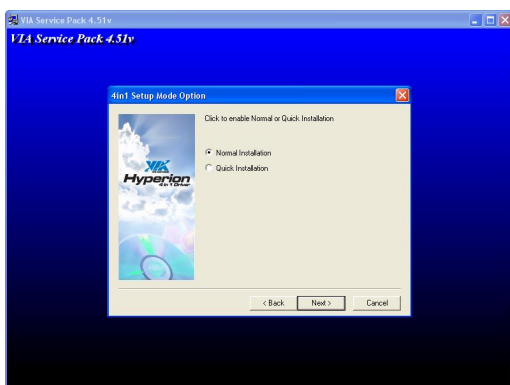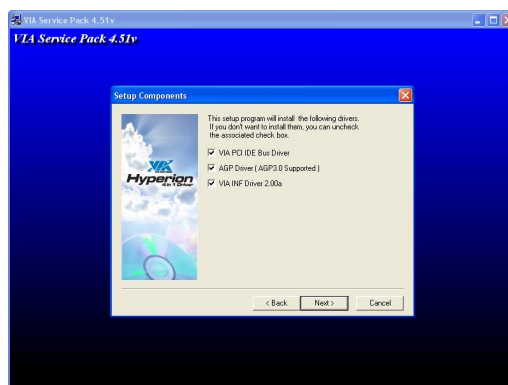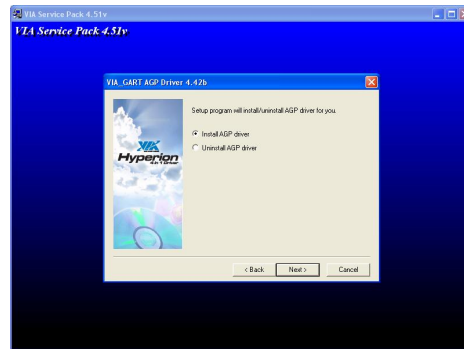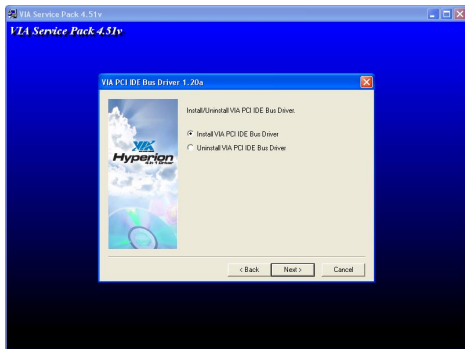
5. Click NEXT to Install ATAPI Vender Support Driver , Click NEXT

6. Install AGP driver , Click NEXT
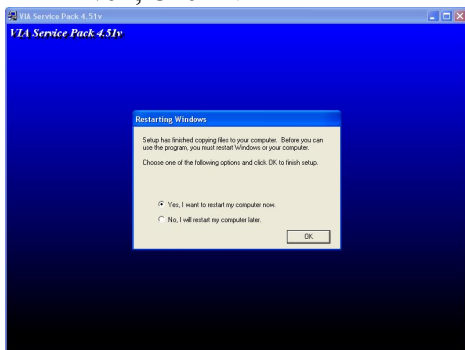
7. Click OK to restart computer

4-2 SOUND install VIA AC97' Codec Audio Driver
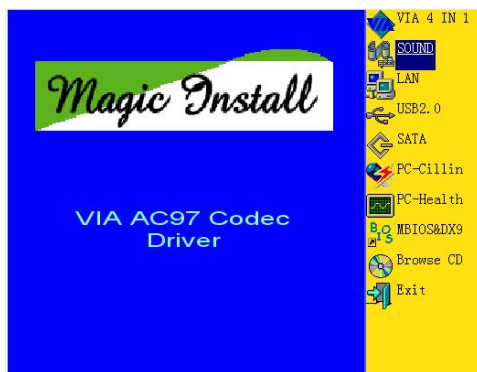
1. Click SOUND when MAGIC INSTALL MENU appears

2. Clink NEXT when the VIA Audio driver setup program windows appear

3. Click NEXT start install audio driver

4. Click Finish and Restart Windows
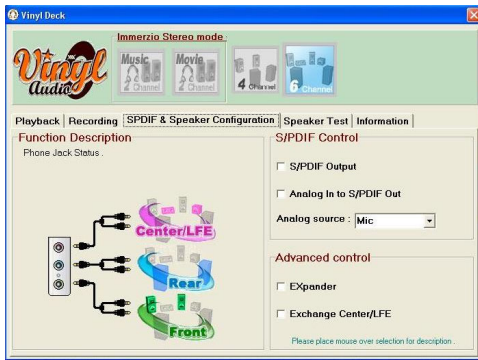
5. Sound Effect select and Speaker configuration setting
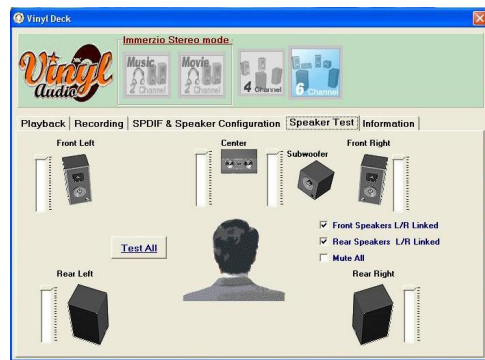
6. 6 channel speaker position test

Note: **The path of the file**

For WIN98/NT4.0/WIN2K/XP is X:\CODEC\VIACODEC\SETUP.EXE

4-3 LAN Install VIA Rhine II Fast Ethernet Driver (V880DAS)

The VIA Rhine II Ethernet Adapter Driver path is X:\VIA\LANDRV
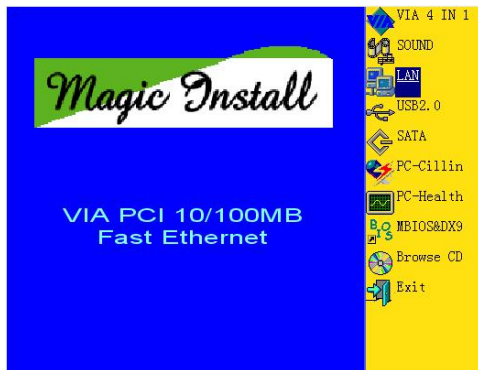
1. Click LAN when Magic Install Menu appear

2. Setup VIA Rhine II Fast Ethernet Driver

4-4　USB2.0　Install VIA USB2.0 Device Driver

Note : The VIA USB2.0 driver need windows XP Service Pack 1 or later support

1. Click USB2.0 when MAGIC INSTALL MENU Appear

2. When USB2.0 Setup Program Appear, Click NEXT
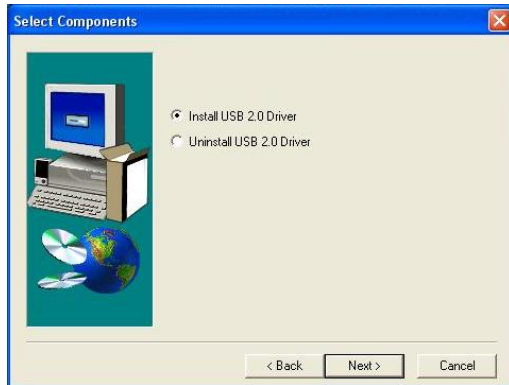
3. Click NEXT , start install VIA USB2.0 driver   4. Select FINISH and Restart your Computer

The Path of the file is X:\VIA\VIAUSB20\SETUP.EXE

4-5   SATA   Install VIA Serial ATA RAID Driver

1. Click SATA when MAGIC INSTALL MENU appears   2. Click NEXT when the setup wizard windows appear
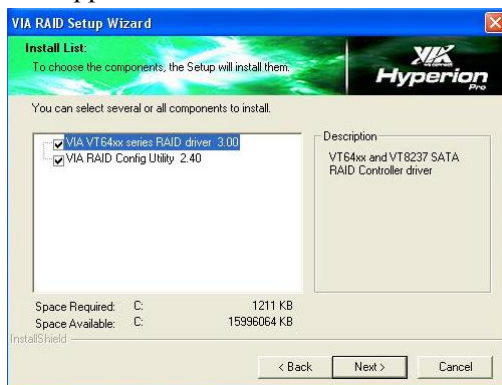
3. Choose Install components and click NEXT   4. When the review windows appear, Click NEXT, when the driver installation Finish, Click NEXT, Click Finish and restart your computer

The Path of the file is X:\VIA\VIASATA\SETUP.EXE

Making SATA HDD driver diskette before Install WindowsXP/2000

If you only have Serial ATA HDDs on your system, before you install the Windows XP or Windows 2000, you will need to make a SATA HDD driver diskette before you start to install the Operating System.

How to make a SATA HDD driver diskette?

STEP 1: Insert the diskette which been formatted in floppy drive on a system which can start OS.

STEP 2: After booting OS insert the bundle CD in your CD-ROM

STEP 3: Copy all the files from \VIA\VIASATA\DriverDisk to floppy diskette

Once you have the SATA driver diskette ready, you may start to install Windows XP or Windows 2000 on your System.

Installation of Windows XP/ Windows 2000

For installation of Windows XP or Windows 2000, please insert Windows XP or Windows 2000 CD into the CD-ROM drive. Then remove the floppy diskette, and boot the system. At the very beginning, you will see the message at the bottom of screen, "Press F6 if you need to install a third party SCSI or RAID driver…."

At this moment, please press <F6> key and follow the instructions of Windows XP or Windows 2000 for the proper installation.

4-6 PC-HEALTH Winbond Hardware Doctor Monitoring Software

The path of the file is X:\VIA\687HW\SETUP.EXE

(Support Windows 9X/ME/2K/NT/XP)

1. Click PC-Health when Magic Install Menu appears
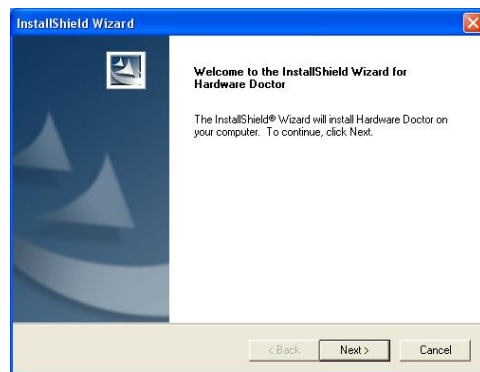
2. Click Next , Hardware Doctor install wizard windows appear

3. Select program folder place, Click NEXT
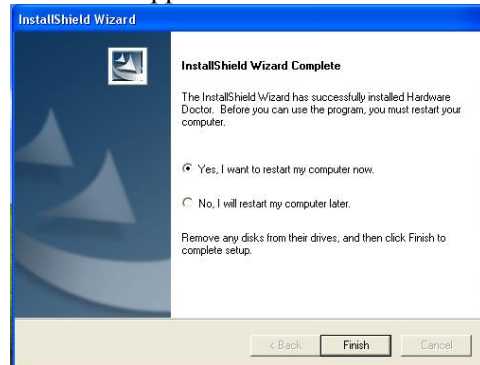
4. Click Finish and restart your computer
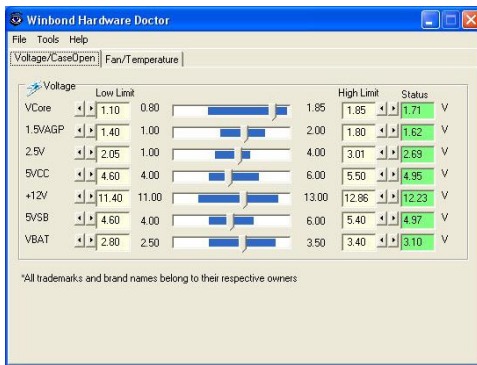
5. Executing Program → hardware doctor → Hardware doctor , this is Mainboard Work voltage state
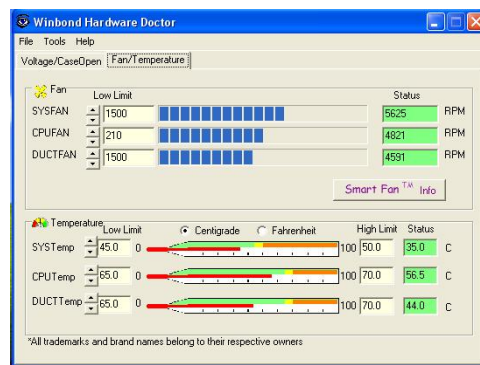
6. This is CPU / system fan and CPU / system temperature work state

4-7　　MAGIC BIOS Install BIOS Live Update Utility
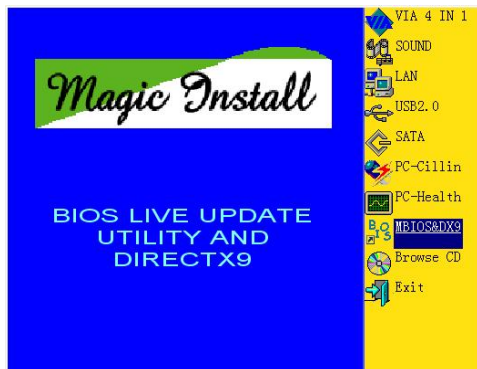
1. Click MBIOS&DX9 when Magic Install MENU appears
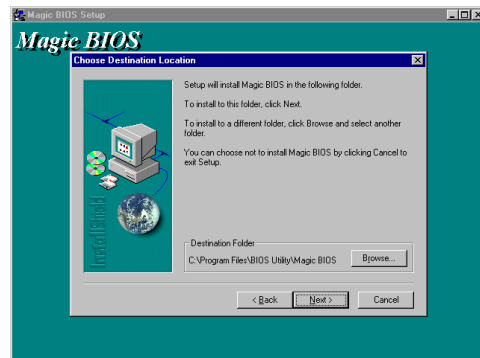
2. Click Next to install the Magic BIOS in Destination Folder
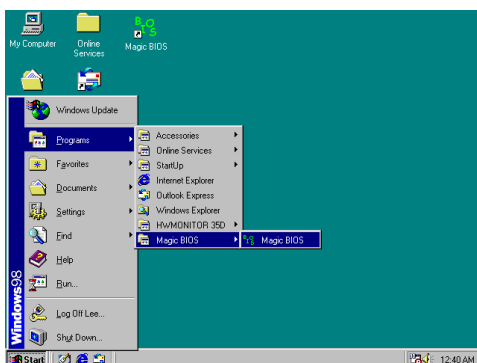
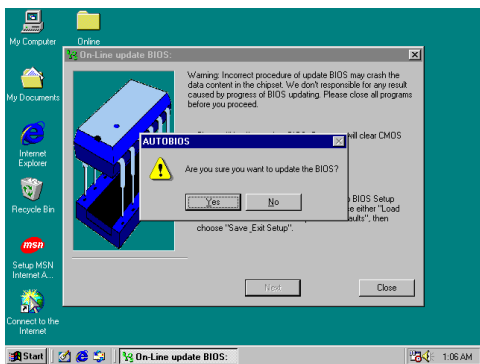3. After finish Setup you will have a Magic BIOS icon in your screen
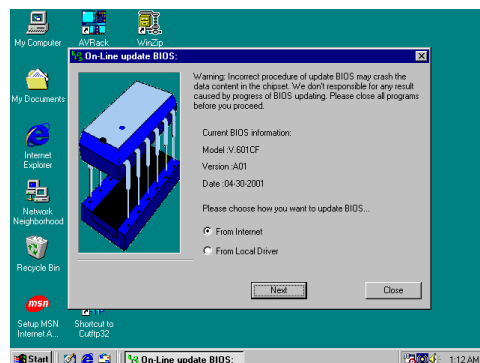
4. Double click the Magic BIOS icon you will have this picture, choose from internet you can upgrade BIOS On-line
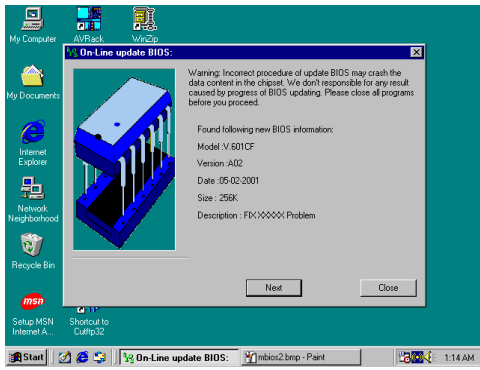
5. When On-line update BIOS the program will auto-check your BIOS version
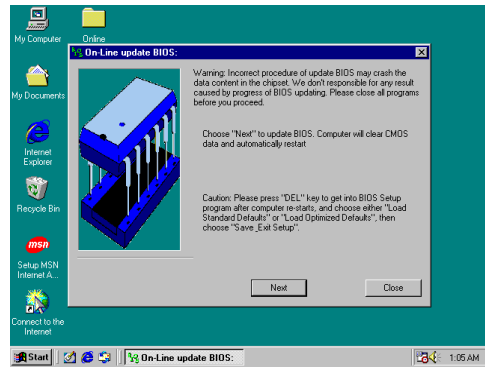
6. Click Next if you need update BIOS, after upgrade BIOS, the system will clear CMOS and automatically restart

7. Click Yes if you want to update the BIOS otherwise choose No to exit
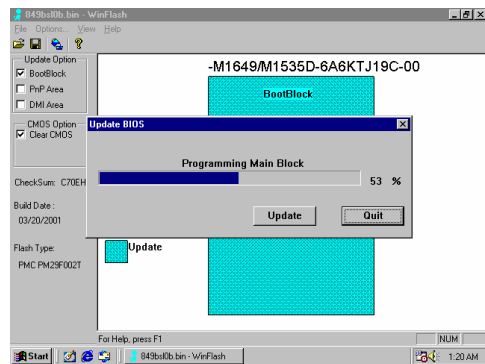
8. When System programming BIOS don't turn off power, after finish update BIOS, the system will clear CMOS and automatically Restart
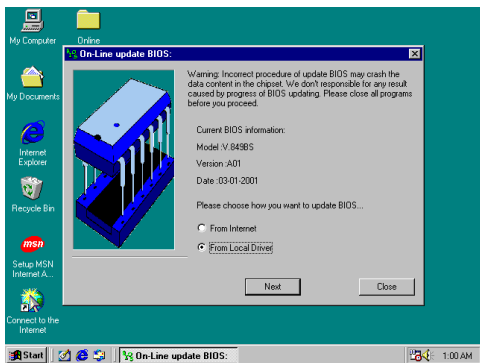
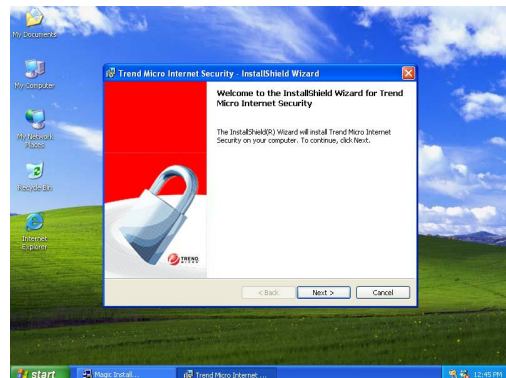9. When choose From Local Driver to update BIOS, you must have the correct BIOS file in your Local Driver
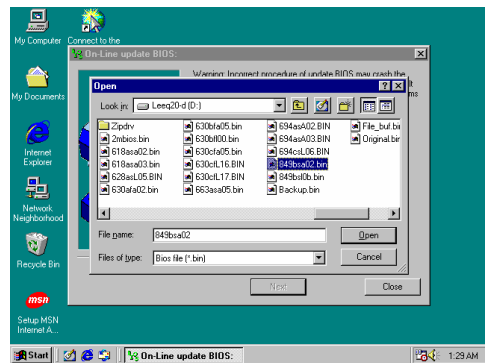
10. Choose the correct BIOS file to update BIOS

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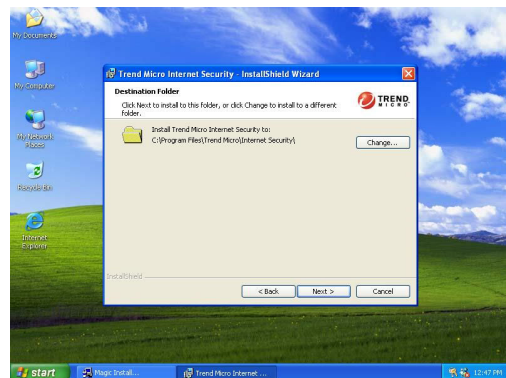## 4-8　　PC-CILLIN Install PC-CILLIN 2004 Anti-virus program
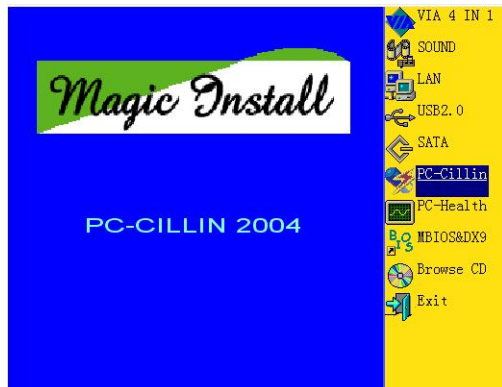
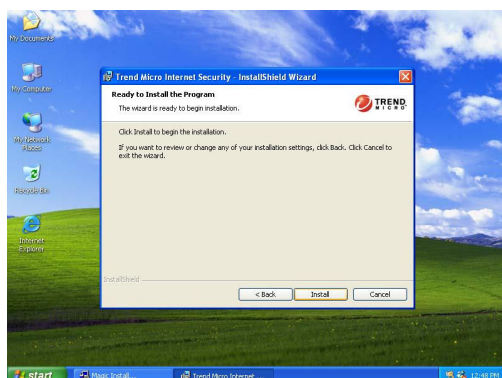1. Click PC-CILLIN when MAGIC INSTALL MENU appear

2. Click NEXT when the "Trend Micro internet security" installshield wizard windows appear
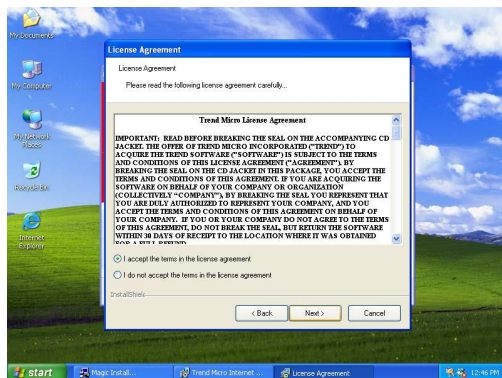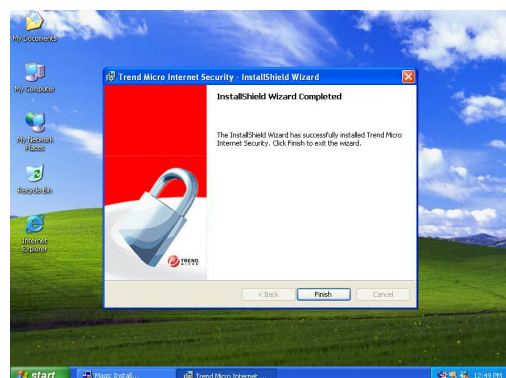

3. This is license agreement, select "I Accept the terms" and Click NEXT

4. Click NEXT and Enter your Customer Information, Click NEXT or choose Change to change the path for the file to be stored

5. Click INSTALL, Start to install the software

6. Setup Complete and click FINISH

7. After PC-CILLIN 2004 complete, Please register your information and we recommend select update item to download newest engine code and virus code

Note :   Please install ACROBAT READER, Before you read PC-CILLIN 2004 User Manual, the path at X:\acrobat\adberdr6_enu_full.exe

4-9   HOW TO DISABLE ON-BOARD SOUND

Enter BIOS SETUP choose INTEGRATE PERIPHERALS choose ON-CHIP DEVICE FUNCTION choose AC97 SOUND DEVICE
Disable on-board sound function by press PAGE DOWN KEY to Disable

4-10   HOW TO UPDATE BIOS

Method 1.   Use "Magic BIOS" update BIOS in Windows 98 (refer)
Method 2.   In DOS Mode

STEP 1. Prepare a boot disc. (you may make one by click START click RUN type SYS A: click   OK)
STEP 2. Copy utility program to your boot disc.   You may copy from DRIVER CD X:\FLASH\AWDFLASH.EXE or download from our web site.
STEP 3. Copy latest BIOS for V880DAS/V880DA from our web site to your boot disc.
STEP 4. Insert your boot disc into A:,
start the computer, type "Awdflash A:\ V880DASAxxx.BIN /SN/PY/CC/R"
V880DASAxxx.BIN is the file name of latest BIOS it can be V880DASA3.BIN or V880DASB2.BIN
SN   means   don't save existing BIOS data
PY   means   renew existing BIOS data
CC   means   clear existing CMOS data
R   means   restart computer
STEP 5. Push ENTER and the BIOS will be updated, computer will be restarted automatically.